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ORIGINAL ARTICLES.

THE RELATION BETWEEN CHRONIC OTITIS MEDIA CATARRHALIS AND CHRONIC RHINITIS.[1]

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CHRONIC catarrh of the middle ear—*i. e.*, otitis media catarrhalis chronica (non-suppurativa)—is invariably associated with some form of chronic rhinitis. The latter is usually of the hypertrophic form, since only about four per cent. of all cases of chronic rhinitis are of the truly atrophic form. Hence, in rhino-aural diseases, less than four per cent. will be strictly of the atrophic form, because all rhinal diseases are not followed by aural disease. In my investigations, by applying the term atrophy in a wider sense, so as to include fibrous degeneration and sclerotic catarrh, as I shall show, I have found considerably more than four per cent. (nearly 14 per cent.) of rhino-aural cases, which may be classed under the atrophic form. It will be found that the catarrhal processes in the Eustachian tube and middle ear proceed from those in the nares and nasopharynx, and hence partake of their nature, or that they occur simultaneously with them and are relievable by treatment of the nasal disease; therefore, all cases of chronic naso-aural catarrh—*i. e.*, catarrh of the middle ear—may be divided into two classes, viz., the *hypertrophic* and the *atrophic*. Since atrophic rhinitis may be further divisible into the strictly atrophic, in which there is shedding of the epithelium and exposure of the basement-membrane, and those in which there occurs a fibrous degeneration, a form of atrophy subsequent to a hypertrophic process in the cavernous tissues of the nares, it will be found that the atrophic division of naso-aural catarrh is thus further subdivisible, making, as I have thus intimated, the atrophic class more numerous than it would be if limited entirely by the strictly atrophic form of nasal disease. It must also be borne in mind that, though all middle-ear catarrhs are associated with chronic rhinitis, it is by no means true that all cases of chronic rhinitis cause chronic aural catarrh.

There is constantly observed a train of symptoms in the middle ear and nares common to the hypertrophic class, and also certain symptoms common to these parts in the atrophic form. It is my object at this time briefly to point out these common and consistent symptoms, to try to discover what other aurists have observed, and to suggest and elicit modes of treatment of these numerous and important cases of aural disease.

[1] Read at the meeting of the American Otological Society, New London, Conn., July 14, 1885.

It may have been observed that I have said nothing about the faucial and pharyngeal symptoms in chronic aural catarrh. It is because the nasal symptoms are so much more important—because, in fact, the pharyngeal symptoms, in comparison with the nasal, are unworthy of consideration as causative elements in aural disease.

In order to study the relation between chronic nasal, and chronic aural catarrh, I have taken the last fifty-five consecutive cases of so-called chronic catarrh of the middle ear, as they have presented themselves to me in private practice, and I have found that forty-seven of these presented well-marked symptoms of hypertrophic nasal catarrh, and eight cases presented equally distinct features of atrophic rhinitis as previously defined.

The nares in the first group present the well-known appearances ranging from congestion to that of engorged and enlarged mucous cushions upon the turbinated bones, usually the inferior ones, both anteriorly and posteriorly. These are soft in the early stages, but grow paler and harder in the more chronic forms. The hypertrophy may extend to the mucous membrane on the septum narium. There may also be enchondromata and osteomata in such cases.

Those in the first category, the hypertrophic form, so far as concerns the fauces, present chiefly an active follicular pharyngitis; next in order of frequency, follicular pharyngitis undergoing retrogression towards atrophy; next, a relaxed condition with incipient fibrous degeneration, and in some few cases, especially in children, a pharyngitis with enlarged tonsils, producing mouth breathing. In some few cases the fauces are unaffected.

Tinnitus aurium is not a pronounced symptom in this form of chronic aural catarrh, it may be absent, and it rarely becomes annoying; when it occurs it is of a mild type of the hissing quality. The Eustachian tube is less permeable (from the hypertrophy) than in the atrophic and sclerotic forms, as will be shown later. The hearing is not so profoundly affected as in the atrophic class of aural catarrh, and when impaired is much more amenable to treatment.

The appearances of the membrana tympani are very variable. None of them are sharply peculiar to the hypertrophic form of naso-aural catarrh. In this form of chronic catarrh of the middle ear, both the malleus and the membrana tympani may be found to be immovable under the pneumatic speculum, or the membrana may rise and fall beneath such inspection, the malleus remaining fixed. In fourteen cases the membrana was opaque without retraction in both ears. In three instances, one ear being unaffected, the membrana in the deaf ear showed no pathological change. In ten cases the membrana was retracted and opaque. In five cases the membrana was thinned and retracted and the incus was visible. In seven instances the membrana tympani

showed no abnormality, but the hardness of hearing was marked. In five instances the membrana was white, thick, and retracted, and in these cases the tinnitus was most marked. It will be shown later that this latter appearance of the membrana is more characteristic of the atrophic form of aural catarrh, in which also tinnitus is a constant and marked symptom. In two cases (associated with enlarged tonsils and mouth breathing in children), the membrana was red and retracted, showing a hypertrophic process in the tympanic cavity. In one instance the membrana tympani was flaccid and thin.

In the *atrophic* class of chronic aural catarrh, the nares are atrophic, their capacity is increased, the mucous membrane over the turbinated bones and septum is pale, dry, and shining, or varnished in appearance in the truly atrophic cases and in the others the mucous membrane is pale and shrivelled with evidences of the previous existence of an hypertrophic process. There is further in the atrophic class a tendency to inspissation and retention of mucus and consequent ozæna. The atrophy is often so great as to permit an easy view of the motions of the soft palate during inspection by anterior rhinoscopy. The pharynx, too, is atrophic, or exhibits a tendency towards that condition, having a glazed or varnished appearance, especially on the posterior wall. In the sclerotic degeneration, also placed in the atrophic group, the fauces may show a fibrous degeneration and sclerosis.

Tinnitus aurium is a most pronounced symptom, and at times of the most distressing quality, in this class of naso-pharyngeal aural catarrh. It is in this group that we find all the distressing cases of tinnitus aurium of the hammering, sawing, harsh quality, associated often with a tendency to nausea and vertigo. In these cases I have observed a constant and curious condition, viz., undue and often excessive patulence of the Eustachian tube. It seems as if the atrophy and consequent widening seen in the nares in these cases, had extended to the Eustachian tube. Inflations, therefore, are disagreeable and often painful, and upon auscultation the air is heard to rush into the middle ear. It has been claimed by some observers (Rüdinger and others), that a sudden, undue, and continued patulence of the Eustachian tube causes peculiar and disturbing subjective sounds in the ear. Some such connection may exist between the excessive tinnitus and the constant atrophic widening of the Eustachian tube in these cases. But, whether the Eustachian tube be less or more closed than normal, resonance of the ear is altered and so-called subjective sounds become audible and annoying. The hearing in these cases is most profoundly affected and least remediable.

In the atrophic aural catarrhs the membrana tympani is more uniform and consistent in its pathological appearances than in the hypertrophic forms. It is either thick, white, and retracted, or it is thinner, but still white and retracted, and in the latter state the incus becomes plainly visible. In those cases in which the membrana is thick, white, and retracted, the precedent hypertrophic process has been most probably excessive, whereas, in the form with the thin and retracted membrana the process probably has been chiefly atrophic from the outset. In one atrophic case the membranes were thick and cutaneous in appearance, and exhibited perforations with cicatrized edges.

Treatment.—The local treatment of these cases, in order to be efficient, must be directed chiefly to the nares. Since the catarrhal process in the ear has its origin in the catarrhal process in the nares, amelioration and removal of the latter will be followed by improvement in hearing, and if the organic changes in the delicate parts of the middle ear have not been too profound, by removal of the deafness.

It will also be found that tinnitus aurium in these cases of catarrhal disease of the Eustachian tube and middle ear, is most relieved by treatment of the catarrhal processes in the nares and nasopharynx. This fact throws force into the argument that tinnitus aurium is a truly objective sound, induced by increased vascularity and the motion of the blood in and near the sound-conducting parts of the ear.

As the congestive state of the vascular tissues near the ear is overcome by treatment, the tinnitus will be found to diminish, and this desired end is often best brought about by local treatment of the nares and nasopharynx.

In some instances the appearance of the membrana tympani becomes, under treatment of the nares and nasopharynx, nearly normal in every way. Whereas, all endeavors to treat chronic catarrh of the middle ear by applications to the external ear surface of the membrana, are worse than useless, since they distort and disturb the membrana and increase the deafness and tinnitus.

Treatment of the middle ear by inflations alone, or by applications to the throat, and by inflations without nasal treatment is either useless or of far less value than naso-aural treatment. In the hypertrophic form of naso-aural catarrh, the treatment may be briefly defined as cleansing and astringent; while in the atrophic form it may be defined as cleansing and stimulant.

In the first class there may be placed the use of sprays of Dobell's solution in its weakest form, and solutions of iodide of zinc, and carbolate of zinc, not more than two and a half grains to the fluidounce in strength. To the fluidounce of water may be added two fluid-drachms of Listerine in the combination with sulphocarbolate of zinc. In the milder forms of nasal catarrh, an excellent spray may be found in equal parts of the distillate of witchhazel and water, and in children's hypertrophic catarrhs, the spray of fluid cosmoline (Petroleol) is most desirable as bland, alterative, and manageable, as it does not flow into the fauces and alarm the patient. In the denser, more chronic, hypertrophic state in the nares, the diseased tissues may be touched with the following preparation of iodine, conveyed to them on cotton by the cotton-holder, under perfect illumination of the nares by the forehead reflector:

℞.—Iodinii cryst. . . . gr. viij.
Potass. iodidi . . gr. xxxviij.
Glycerinæ . . . . f℥vj. —M.

In applying this to the inferior turbinated bones, great care should be taken to make the applications

to their upper surfaces, and not to touch their lower edges, nor the floor of the nares, as these parts are most sensitive. With these precautions the applications may be carried to the pharynx through the nares. Should smarting be brought about by these applications of iodine to the nares, it may be relieved by the aforesaid spray of fluid cosmoline. When this iodine solution loses its power to excite absorption, stronger iodine solutions may be used, as, for example, equal parts of tincture of iodine and glycerine. These applications shave down, so to speak, the hypertrophy. *No* form of nitrate of silver application is tolerated in the nares in the hypertrophic form of nasal catarrh.

The throat symptoms can be combated by suitable gargles or by direct applications of preparations of tannin or chloride of iron, made by the cotton-holder under illumination from the forehead mirror, directly to the diseased spots, and not by an indiscriminate swabbing, which is as injurious as it is unskilful. The day has gone by, thanks to special surgery of all forms, when diseased tissue is reached by all-embracing applications, which excoriate and cauterize healthy and unhealthy tissue alike.

After suitable applications are thus made to the nares and fauces, the tympana should be inflated. If the catheter is to be used, it is best done before applications are made to the nares, as saving just so much additional manipulation after local medication.

In the atrophic forms of naso-aural disease, the first consideration in treatment is the removal of the inspissated matters, crusts, scales etc., from the nares; this may be effected by the nasal douche, but I prefer other methods. On the whole the best results are obtained by softening sprays and subsequent removal of scales or crusts by proper forceps. After the parts are cleansed and exposed, the mucous membrane may be stimulated by nitrate of silver in powder[1] or in solution. The strength of the latter should never exceed 5 grains to f℥j of water. Preparations of sulphocarbolate of zinc and Listerine are also efficient as stimulants in these cases. The general rules to be observed in treatment of chronic naso-aural catarrh are: 1, in the hypertrophic forms, to allay engorgement, to soothe, at it were, the injected and inflamed parts; and 2, in the atrophic forms, to stimulate the mucous membrane of the nares and fauces. All of these methods must be conducted within reasonable limits.

Another important point is to bear in mind the naturally erectile nature of the tissues in the nares and nasopharynx, and their consequently easy excitability, and also that osmosis is easily effected in these parts.

Hence, in order to prevent this, a solution containing salt, for example, should not exceed 56 grains to the pint. If greater than this, exosmosis ensues and the tissues are drained too much; if less than this, endosmosis occurs, the tissues become distended, and pain and discomfort ensue. And this holds good for all saline solutions.

I have thus sketched very briefly the general plan of treatment in naso-aural catarrhs. When the nasal disease of either form demands more surgical treatment, such as the ablation of hypertrophy, the use of the galvanocautery, or the removal of diseased and necrotic bone, the affection has passed into the territory of the rhinologist.

It will be found, however, that while all chronic, aural catarrhs are associated with nasal catarrh, all cases of chronic rhinitis are not followed by chronic aural catarrh, and it will also be found that the worst cases of chronic rhinitis are usually not associated with aural maladies, and that the rhinitis of aural diseases is of a comparatively milder form than that found in nasal diseases alone.

A word of caution should be said here in relation to the use of the galvanocautery in the nose. It, like the nasal douche, is open to the criticism that, in some cases, it excites an inflammation in the middle ear. Very recently I have seen two cases of acute otitis media following the use of the galvanocautery in the nares for the relief of hypertrophic nasal catarrh. I know this is a small number of cases of inflammation attributable to the use of an instrument so frequently employed not only with benefit to the nares, but without simultaneous irritation to the ears, but in the cases I report I can see no other explanation of the aural inflammations except in irritation of the naso-pharynx, Eustachian tube, and tympanum, set up by the galvanocautery.

Conclusions.—1. That there is a constant causal relation between chronic nasal and chronic tympanic catarrh, in which throat and faucial diseases play only a subordinate part, and this naso-aural catarrh is found under two chief forms, viz., the hypertrophic and the atrophic.

2. It follows that, owing to this close connection between the nose and the middle ear, that treatment of chronic catarrh of the middle ear, to be efficient, must be coupled with that of the coexistent and causal rhinitis, and that treatment of the throat alone is of little avail in chronic aural diseases. Treatment of, and by the way of, the external ear is of course useless. It is also shown that tinnitus aurium from catarrhal causes is best overcome by treating the chronic rhinitis.

3. Since the appearances of the membrana tympani are so variable in the hypertrophic form, nothing can be predicated of the tympanic disease by simple inspection of the membrana. In the atrophic form of chronic aural catarrh, the appearances of the membrana being more consistent and invariable, the surgeon can predicate more of the tympanic disease from inspection of the membrane, viz., that it is sclerotic in form. From this variability in the appearances of the membrana in the hypertrophic form of aural catarrh, it follows that lesions of the membrana taken alone, are of little moment respecting the hearing. The lesions most competent to induce acoustic disturbances are apt to be situate upon the ossicula or upon the inner tympanic wall near the fenestræ.

4. It behooves the aural surgeon, therefore, to inspect and treat the non-surgical forms of nasal catarrh as they occur in chronic catarrh of the middle ear, laying more stress on the condition of the nares

[1] Dr. C. Seiler's formula: ¾–15 grain to 150 grains of powdered starch.

than upon the fauces, so far as any causal relations between these parts and the deafness are concerned.

THE ETIOLOGY OF TRAUMATIC TETANUS.[1]

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KNOWN from the earliest times, a wound complication of extreme gravity, the subject of many investigations and innumerable papers, traumatic tetanus is an affection respecting the cause and manner of the production of which there is still much uncertainty, and little, we might also say, no definite knowledge. There is therefore full justification for a brief consideration of the views that are held respecting its etiology; the more so as not only is there much advantage in knowing these respecting any disease, but, further, in this affection the adoption or rejection of certain methods of treatment is largely based upon the views entertained as to the cause of the muscular spasms.

The study of any considerable number of reported cases, in which the diagnosis has been correctly made, will quickly convince us that under the generic head are embraced two species, the one characterized by spasms primarily affecting the injured part, the other by those at first located in the muscles whose nerves have origin in the medulla oblongata. At least since the time of the appearance of Colles's paper (1852), there has been, as we believe properly, a disposition on the part of most to regard as cases of true tetanus only those of the last-mentioned kind. And yet, a death-producing generalization of spasms originally local, does, though rarely, take place, and the later stages of cases of this sort are identical with those in which the earlier symptoms were connected with the muscles about the jaws.

There is little or no question that the seat of the disease is in the central organs of the nervous system—scarcely more that it is essentially an exaltation of their reflex irritability: but how is this condition brought about? Is it by the nerves, or the blood-current; by extension of inflammation, by reflected irritation, by septic changes, or by the presence and development of microörganisms? Each of these theories, with the exception of the last, has had numerous advocates, and the arguments therefor have had apparently substantial basis in the symptoms present, the results of treatment, and the pathological conditions discovered upon autopsy. That it is by ascending neuritis that the morbid state of the cord is induced is thus indicated. There is beyond doubt nerve-injury in the original wound, such injury being either of incision, complete or partial, of contusion, of laceration, of puncture, or of compression or irritation from an unremoved foreign body. Resulting therefrom is inflammation of the nerve-cord, either involving its whole extent or macroscopically viewed, affecting parts here and there as it is traced upwards; at times attacking few fibres and discoverable only by careful microscopical examination: such inflammation being indicated by congestion, by exudation, by connective-tissue proliferation, by degeneration of the tubules. Passing to and up along the cord, there are to be found such conditions of the bloodvessels, the coverings, and the gray and white matter as are indicative of inflammation.

The chain would seem to be complete and the correctness of the theory established; but nerves are constantly being injured, yet tetanus is of rare occurrence. In very many cases it has been impossible to discover either neuritis or myelitis; and it seems much like begging the question to claim, as has been done, that in such cases there is pathological change, but of so delicate a nature as not to be discoverable by our present methods of investigation. In the quickly occurring and rapidly fatal cases, there is not time for the development and extension of inflammation. Inflammatory nerve changes have often been observed when there has been no tetanus; and the symptoms of acute ascending neuritis are altogether different. The spinal cord changes in certain cases are much more probably results than causes, due to circulatory states consequent upon the convulsions; in other cases they cannot be distinguished from those repeatedly found associated with diseases unattended by spasms. And, lastly, were an ascending myelitis the determining cause of the irritability, there ought to be observed a progressive involvement of the muscles upward from the level of the injured area which is not the case in true tetanus; or from the feet and legs, if it be true, as claimed (Michaud), that no matter where the wound is located, the most marked pathological changes are in the lower part of the cord.

Fifty years of experience have but confirmed the truth of Travers's declaration, that "The evidence to establish that tetanus has its origin in inflammation of nervous structures has failed."

If not of inflammatory origin, is tetanus a reflex neurosis consequent upon remote nerve irritation? Such is the opinion most generally entertained whether the disease be associated with a wound or occurring idiopathically. It is argued that, as every one knows, peripheral irritation will give rise to movements affecting, it may be, a whole extremity, movements independent of and in spite of the action of the will; that nerve injury and pressure are often associated with localized muscular cramps or jerkings; that the disease is most frequently developed in cases in which, from the character of the wound, the nerves of the part are torn, bruised, or crushed; that not seldom it is found that an irritating foreign body remains in the tissues, and the sharper, the rougher, the more irritating the substance, the greater the likelihood of the development of the affection; that the state of abnormal reflex excitability especially occurs when the wound is in a part in which sensitive nerve fibres are most numerous and of the highest functional value; that it is often so quickly developed that it could be so only through reflex irritation; lastly, that it can be experimentally produced by wounding nerves.

By reflex irritation may properly be explained the manner of the production of the spasms in those

[1] Read before the American Surgical Asssociation, Washington, April 24, 1885.

cases in which they originally affect the injured part and thence pass upward and outward ultimately to become general. Such progression is strictly in accordance with Pflüger's laws, and, were the cases presenting the phenomena of it other than exceptional ones, perhaps not to be justly considered as those of true tetanus, the theory of radiation from an irritated nerve centre might, without hesitation, be accepted as the correct one. But what is known respecting the physiology of the nervous system does not warrant us in believing that in a healthy individual a reflex irritation, starting, it may be, in the foot or the hand, passing over all the intervening portion of the cord will produce in its upper part an influence that will manifest itself not in a single or in a few eclamptic seizures, but in a persistent contraction of the muscles passing from above downward, sooner or later, in most cases, to become general. If nerve injury is the determining cause, why is the disease so infrequent, attacking but 1 in 200, 300, 500, 1000 of the surgical patients in large general hospitals or of the wounded of modern wars? Surely the assumed exciting cause is often enough present.

Consider for a moment some of the special nerve injuries which have been followed by tetanus. In a few cases examination of the wound has shown nerve fibres included in the loop of a ligature—similar inclusions of nerves of smaller and larger size must have occurred over and again. In how many of the declared cases of tetanus must be seen either spasms beginning in the neighborhood of the wound or a mere association of nerve-inclusion with true tetanus otherwise produced. Even if the freeing of the constricted nerve has put a stop to the morbid condition, in some of the cases at least, study of the reported symptoms will show that there were present only limb spasms; tetanoid, but no more the convulsions of true tetanus than are the stump twitchings which are so often met with.

Again, have hand, and especially foot wounds, that are unquestionably oftentimes followed by tetanus, such danger attached to them as is so generally believed; and if so, is it due to the fact that in these regions are terminal fibres of highly sensitive character correspondingly liable to become irritated? Although it would seem from published statistical tables (*e. g.*, that of our distinguished Fellow, Dr. Yandell), that hand and foot wounds furnish about fifty per cent. of the cases of tetanus that occur, before concluding that such tables establish the excessive danger of injury of these territories, errors of diagnosis must be eliminated and determination made of the number of these wounds in comparison with the whole number of traumatisms occurring. It is in this connection an interesting fact that in over 16,000 wounds of the foot in our late war there were but fifty-seven cases of tetanus, and in perhaps 12,000 or 13,000 of the hand but thirty-seven. Again, in punctures of both hand and foot, it has not been so much when they have affected the sensitive parts of the fingers and toes, but when there has been piercing of the palmar and planter fasciæ that tetanus has been most commonly developed.

If the pressure or more active irritation of a lodged foreign body is the exciting cause, why should it so seldom exert its deleterious influence; and why should the experimental injuries inflicted upon animals so generally fail? In only a very few cases, as those of McDowell and Brown-Séquard, has it been found possible to produce the tetanic state. The results of operative treatment certainly do not lead to the acceptance of the irritation theory. Amputation has seldom relieved, and is favored by few or none at the present day. Nerve section secured 10 favorable results out of 16 cases collected by Letievant, but in at least one-half of the patients who recovered, the muscles first affected were those of the injured parts; and, further, this operation has been performed in too small a number of cases for its statistics to have much argumentative weight. Nerve-stretching, according to Agnew's table, was followed by cure in one-fourth of the cases in which it was tried. But here again, the two classes of spasms have not been separated, and further, in most if not all the successful cases, "internal remedies were also administered." In one of the cases reported as cured by this operation, of which I have personal knowledge, twenty-four hours after the stretching, the spasms were still present in the opposite limb, and chloral and the bromides were steadily administered. It is an interesting fact to notice in this connection, that of the 350 nerve-stretchings for causes other than tetanus given in Agnew's tables, not a single one was followed by tetanus. If such exemption is not accidental, in it is to be seen additional evidence of the correctness of the irritation theory, or was it due to the absence or very limited amount of inflammation in and about the wound, and the great care taken to secure, if possible, primary union?

The two facts that speak most strongly in favor of this theory of reflex neurosis are the excessively quick development of the morbid state in certain cases, and the influence of cold, acting either alone or in conjunction with traumatism. It is certainly hard enough to understand how reflex irritation from a lacerated wound of the thumb could give rise to a tetanus that should kill the subject of it in fifteen minutes from the time of the injury, but much harder to explain the occurrence on any other theory. Unfortunately, Robison's case is very imperfectly reported, so that there is no way to determine whether or not the facts were as stated, and, still more, whether or not very material facts have not been omitted.

The influence of cold has long been believed to be a potent one in the production of tetanus; especially when the low temperature has been associated with much dampness; such influence being most likely to be manifested in regions or seasons in which there is a great difference between midday and midnight heat. Acting locally upon an exposed wound, or generally upon the body at large, it has been held that the cold damp air affects the terminal nerve-filaments, by reflex action arousing an abnormal irritability of the central organs. This may be so; and a like action may result from the high temperature of tropical countries, but as will be seen later, the produced effect may be in consequence of the presence of chemical or living irritants, the development of which is favored by the thermal conditions, aided it may be, when cold is acting, by

the internal congestions consequent upon the external chilling.

If neither through nerve-inflammation nor reflex action is developed that extreme irritability of the central organs that manifests itself in tetanic spasms, how then can it be induced? Only by changes in their blood-supply; changes either in quantity or quality. Experimentally, convulsions can be produced by overfilling or by emptying, by injection and by bleeding, but such convulsions are not tetanic. Both an hyperæmic and anæmic state of the cord have been repeatedly shown upon autopsy, but here, as always, when diametrically opposite conditions are found, neither can with good reason be regarded as primarily causative. It is not then in the quantity, but in the quality of the blood, that there is to be found what is sought, if the humoral theory be the correct one, in the presence of a septic element developed in the blood or of a special organism coming from without. Neither chemical examination, microscopical investigation, nor experimental injection has, up to the present time, established the truth of this theory,[1] which is rendered probable, if at all, only by reasoning and analogy. That certain vegetable alkaloids and animal poisons entering the circulation so affect the spinal cord and the medulla as to give rise to severe and rapidly recurring, oftentimes fatal convulsions is a fact. In the absence therefore of absolute proof to the contrary, it is not impossible that tetanus may be thus produced. In the wounds that are most likely to present this complication, there is, both in the fluids poured out and in the tissues disorganized, abundant material, by the decomposition of which septic matter may chemically be developed that under favorable circumstances of atmospheric conditions or constitutional state may produce tetanic spasms. Even in a physiological fluid—urine—Gautier was able to find a ptomaine capable of tetanizing animals. Does not the danger of punctured wounds of the fascia of the hand or foot lie in the pent-up fluids rather than in the nerve-damage; and is it not in the pus, the pieces of clothing, the bits of wood that have been found in some of the reported cases, and not in the lacerated nerve-fibres that one should look for the exciting cause of the fatal affection? The veins and lymphatics of the nerves themselves may readily be the channels through which the morbific matter may be carried in; and the anatomical fact that a direct relation exists between the sensibility of a nerve, and the number and closeness of connection of its associated lymphatics, may go far in explaining why tetanus is so frequently associated with slight wounds of parts endowed with high sensibility, as the fingers and toes.

The influence of climatic conditions and atmospheric states may find explanation in their power over decomposition and organic growth, or in the produced constitutional depression of the system, rendering it less resistant to the poison or the germ. Because of such depression we may, perhaps, understand why malaria or scurvy, or anxiety or grief have been found at times conditions precedent to the outbreak of tetanus. When no wound is present, it can only be assumed that it is in the natural secretions that the irritant is developed. The idiopathic cases of the disease are the ones the occurrence of which it is hardest to explain upon the humoral, indeed, upon any theory.

But, it is contended, that were the exciting cause chemical or organic, the disease toxæmic, its attacks should be associated with fever, which is not the case. Yet at times distinct prodromal malaise has been noticed, and exceptionally a marked elevation of temperature. Is fever a necessary result of the presence of poison in the blood, or an essential symptom of a mycosis? For answer, we have but to remember the symptoms of strychnia poisoning, of hydrophobia, and of cholera. Perhaps, as was suggested by Dr. Joseph Jones, in tetanus the frequent absence of high heat has its explanation in the correlated muscular motion that is present.

From time to time reports have been made of greatly disproportionate occurrence of the disease in a single ship of a squadron, building of a hospital, or even bed of a ward. How otherwise than by the presence and action of a virus or a germ can such be explained? That many wounded after a battle or long transport should be so attacked might with more or less truth be attributed to a generally acting atmospheric condition, but not any distinct localization, as it were endemic prevalence, of the affection.

Is it not, then, from very careful chemical and microscopical examination of the secretions of the wound, the tissues in and about it, and the blood of the part and the system at large, that we may hope to receive definite information respecting that which gives rise to this obscure affection? Will it prove to be a peculiar toxic material developing in the breaking down, dying and dead, material, or a specific organism, that will, so far as the cause is concerned, ally tetanus with anthrax, septicæmia, and erysipelas, an organism entering into the open wound, or carried in with the vulnerating body? Whatever it may prove to be, if it is discovered at all, we will hear no more of hypothetical "personal predispositions," or "parts of least resistance," and the treatment will be directed rather toward preventing the development of the poison, the entrance of the microorganism, or the sustaining and quieting the patient until such time as the one shall be eliminated, or the other have completed its life-history.

[1] L. Curtis, of Chicago, thought he had discovered in the blood a peculiar microörganism, but further investigation showed that it was equally present in the blood of a healthy mother and sister of the patient, and in the water of a pond near by.

Arloing and Tripier injected blood from a horse affected with tetanus into the jugular vein of a healthy one, but failed to produce the disease.

AN INTERESTING CASE ILLUSTRATING EMMET'S NEW OPERATION FOR RESTORATION OF PELVIC DIAPHRAGM.

BY J. M. BALDY, M.D.,
OF DANVILLE, PA.

MRS. G., a young German woman, twenty years of age, first child, protracted labor, attended by midwife, child died twenty-four hours after delivery. On

examination I found the perineum torn to the sphincter, with complete loss of muscular and fascial support in the pelvic diaphragm. There was a large mass of scar tissue over the sphincter, but the recto-vaginal septum above this point was thin, being composed merely of the two mucous membranes. There was a small rectocele with deep lateral sulci, the right being the deepest and longest. The cervix was split bilaterally, flush with the vaginal walls, the lips were everted and eroded, the fundus was retroverted, and the whole uterus low down. Pelvic pains and general reflex disturbances were very marked, incapacitating her for marital relations and domestic duties. So much so that she, on several occasions, left her husband and repeatedly expressed the desire to die.

Her general and local condition improved under treatment, but not to any marked extent. The local irritation and chronic engorgement called loudly for operative interference, to which she gladly submitted.

Both cervix and perineum were closed at the same sitting. The surfaces of the cervical tear were freshened with Dawson's tenaculum-pointed scissors by four clean cuts extending far back into the angles of the laceration, thereby removing a large mass of cicatricial tissue from each angle. The tear was then closed with shotted silk wormgut sutures, securing perfect apposition of the freshened surfaces.

I then closed the perineum according to Emmet's new inside operation for loss of muscular and fascial support of the pelvic diaphragm. The steps of the operation are simple. They consist in passing a ligature through the crest of the rectocele and a tenaculum into the labial tissue on each side directly opposite the lower caruncle. Bringing these three points together will form the triangles to be freshened, as is so fully described by Emmet in the third edition of his work. The triangles were then freshened with curved scissors by means of transverse strips or the "carpet rag" method of denudation. The scar tissue was removed completely to the rectal mucous membrane.

The operation differs from the old one principally in the introduction of the sutures, the denudation differing only in freshening the sulci far up to their apices, and in not freshening labial surface which has not been torn. The stitches were introduced from the apex of each sulcus, forward. A tenaculum was hooked in the apex of one sulcus, drawing the apex backward towards the cervix and thus preserving the line on which the sutures were to be introduced, intact. The first two sutures were passed transversely and were followed by others introduced *forward*, including plenty of tissue, towards the operator, to the bottom of the sulcus, where they were reintroduced and carried *backward*, emerging just beyond the freshened edge of the rectocele directly opposite the original point of introduction on the other side of the sulcus, and thus forming a **V**-shaped course. Six sutures were thus introduced in each sulcus. When these were drawn up into place and closed, there remained only a small triangular space of freshened surface in front of the rectocele, which was closed by Emmet's crown and two superficial, external stitches.

The crown stitch consists of passing a suture into labial tissue between points of original introduction of tenacula, including the crest of the rectocele. All sutures introduced were of shotted wormgut of the finest quality. In adopting this method of closure, perfect restoration of the perineum and the posterior vaginal wall, which is the natural support of the anterior wall and bladder, was secured.

The amount of discomfort afterward was slight. The knees were not bound together as in the old operation, no opiate was needed, there was no swelling or oozing and very little pain. The bowels were kept soluble and the patient passed her own urine after the first day. Vaginal injections of warm water and astringents were used and a small piece of carbolized gauze, spread with cosmoline, was introduced into the vagina daily. Union was perfect throughout. The external stitches were removed on the eighth day, and the woman was up and around enjoying good health by the fourteenth day.

MEDICAL PROGRESS.

THE HIGH SECTION WITH SUTURE OF THE BLADDER.—G. TILING, in the *St. Petersburger med. Wochenschrift*, 1885, No. 4, advocates, as the result of operative experience, the high section with suture of the bladder.

After the operation by median section the writer observed a prostatic abscess, followed by inflammation of the whole pelvic floor. The whole pelvic diaphragm became hard and rigid, without resulting suppuration. The condition persisted one year; at the end of the second year the symptom disappeared.

This disagreeable experience led the writer to resort, in his next four operations for the removal of large stone, to the high section of the bladder. In a boy, seven years of age, the operation was easily performed without dilatation. The peritoneum was not engaged, and the bladder wound was closed by five silk sutures, which did not involve the mucous membrane. The retained catheter was not required, and the wound united by first intention.

In the second case, a man aged twenty-two years, the extent of the bladder was so limited that the peritoneal fold lay beneath the symphysis pubis. The stone weighed 730 grains, necessitating an extensive vesical incision for its removal. In spite of temporary catheterization, the wound reopened on the sixth day, and eight weeks elapsed before the fistula healed. Two years later an abdominal hernia, half the size of an apple, in part containing the bladder, was developed.

In the third case—the patient was a man thirty-eight years old—the bladder, when full, extended to a point midway between the symphysis pubis and the umbilicus. The anterior wall was, nevertheless, covered by the peritoneum, which extended an inch below the symphysis. The sutures came away on the seventh day. The patient suffered great pain in the region of the right kidney, but was discharged much improved in two weeks, though a capillary fistule still persisted.

In a fourth patient, who from childhood had suffered from pain in the bladder, operation was successfully performed. The peritoneum was situated very high and the incision was closed by eleven interrupted silk sutures, and an additional continuous suture to support

the former. Union took place in two weeks with the application of a retained catheter.

Although the operation is favorably considered by Tiling, he fails to discuss its difficulties, especially the introduction of the suture, which must be applied in a very contracted space.

In a case elsewhere reported, a fistula, resulting from the operation, persisted, and all means taken to close it were futile, even permanent drainage of the bladder failing entirely.—*Centralblatt für Chirurgie*, June 6, 1885.

TRAUMATIC HERPES CONSECUTIVE TO SURGICAL OPERATIONS AND DENTAL AFFECTIONS.—DR. TH. DAVID summarizes the different forms of traumatic herpes consecutive to surgical operations and dental affections as follows:

1. There frequently occurs, more particularly in women and young subjects, as a result of operations upon the teeth or of affections of the dental apparatus, an herpetic eruption, either upon the gingival, buccal, or labial mucous membrane, or upon the skin of the face.

2. The eruption is either confluent or discrete.

3. It is sometimes accompanied by fever and sometimes exempt from all febrile manifestations.

In the first case it is a species of febrile herpes, or rather a local manifestation of h rpetic fever (Parrot), a manifestation determined by a lesion of the dental apparatus.

In the second case it is an eruption originating in a nervous disorder, determined by operations or dental lesions, traction upon the buccal commissure, and by pressure upon the cutaneous and mucous nerves of the face.

4. This latter variety of traumatic herpes, when accompanied by fever, swelling of the face, redness of the skin, may simulate simple inflammation or erysipelas.

5. The affection is not of a serious nature, and disappears after a short duration.—*Journal de Médecine de Paris*, June 14, 1885.

THORACIC ATROPHY IN PLEURISY.—M. DESPLATS, at a recent meeting of the Société des Sciences Médicales, expressed the following opinions relative to pleuritic atrophy of the thorax:

1. Among pleuritics atrophy of the thorax is a frequent and early affection.

2. Such atrophy produces at an early date difficulty in respiration.

3. Later it causes, to a great extent, the deformed thorax, so frequently a result of this disease.

4. And this favors indirectly the deposit and increase of tubercular material.

It is, therefore, necessary—

(*a*) To prevent atrophy, when a predisposition to it exists.

(*b*) To arrest it when established.

(*c*) And, also, to combat it by active treatment, including general tonics and local stimulants, particularly faradization, respiratory gymnastics, and by the use of compressed air.—*Revue de Thérapeutique*, June 15, 1885.

INOCULATION OF TUBERCULOSIS IN THE HUMAN BEING.—E. A. TSCHERNING reports in the *Fortschritte der Medicin*, 1885, No. 3, the case of a young woman, 24 years of age, not scrofulous, who wounded herself on the volar side of the first phalanx of the middle finger, upon a cuspidor containing tubercular sputa rich in bacilli. Fourteen days later there were symptoms of a beginning panaritium. There was no suppuration, but a swelling the size of a pea made its appearance between the skin and sheath of the tendon.

This was enucleated and the wound rapidly healed. Several months later, on examination of the finger, it was found œdematous, and the sheath of the tendon swollen, rendering use of the member impossible. In addition, the cubital and axillary glands were swollen. Enucleation of these glands was deemed advisable, and the operation performed, while at the same time the middle finger was amputated at the metacarpo-phalangeal joint, and the diseased tendon, as well as the somewhat extensive granulation tissue, removed as far as the middle of the hand.

The sheath of the tendon was found by microscopic examination to be filled with abundant granulation tissue, in which were found numerous miliary tubercles, however with not constant central caseation, numerous large cells, and partly central giant cells.

In the lymphatic gland was also found miliary tubercle, which here, as well as in the tendon-sheath in all the sections, plainly exhibited the presence of tubercle bacilli, generally solitary, but occasionally in groups of two or three bacilli. The condition was perfectly in accord with that existing in surgical tuberculosis. Inoculation experiments unfortunately could not be carried out. Two months after the operation the patient was perfectly restored to health, and there were no indications of further lymphatic complication. Up to the present time the case is unique.—*Centralblatt für klin. Medicin*, June 20, 1885.

BILATERAL NEURALGIA AND DILATATION OF THE STOMACH.—MM. CHANTEMESSE and LE NOIR, in an elaborate paper based upon observations made in the clinical service of M. Bouchard, describe a form of bilateral neuralgia due to dilatation of the stomach. The writers consider the symtomatology of the disease as well established, though its differential diagnosis is frequently difficult.

This form of neuralgia is frequently ushered in by a prodromic period, during which, while there is little or no pain, digestive disturbances are more or less marked, but are not appreciated by the patient in whom they are marked by vertigo, pain or loss of sensibility in an arm of some portion of the member, in a finger, or, further, by a sense of constriction of the upper part of the thorax.

Examination will at this stage sometimes discover that for several years the patient has suffered from slowness of digestion and drowsiness after meals. Later on, pain appears as a symptom, at first mild, afterward more intense.

Gastric disturbance now increases, sometimes causing greater distress than the neuralgic symptoms, and examination reveals the existence of gastric dilatation, which is frequently very extensive. This condition is frequently followed by a chain of symptoms, embracing pain throughout the entire body, palpitation, vertigo, and semi-syncopal state, etc.

That the essential cause of the neuralgia is dilatation of the stomach is evident from:

1. Coexistence of the neuralgia with dilatation of the stomach.

2. The appearance, first, of gastric symptoms, neuralgic phenomena are secondary and are suddenly manifested when the gastric disturbance is exacerbated, and are diminished when this diminishes in intensity. Diagnosis is sometimes assisted by observing that acute neuralgia disappears concomitantly with a notable diminution in the volume of the stomach.

3. The failure of local treatment and beneficial result of means directed to the relief of the stomach.

The prognosis is serious, inasmuch as the presence of such neuralgia is an indication that the gastric disease has reached an advanced stage, and that its cure is difficult, even when the condition of the stomach is capable of great improvement.

Intensity of pain is not of the same prognostic value as is a knowledge of the length of time during which the symptoms have persisted. In acute forms of the disease, which accompany digestive disturbance, their intensity is great, nevertheless they may disappear entirely in a few days.

On the contrary, in the chronic form, the neuralgic symptoms, though slight, persist with great obstinacy.

The therapeutics of the disease is entirely confined to such remedies as are calculated to improve the condition of the stomach.—*Archives Générales de Medicine*, July, 1885.

RESECTION OF THE HUMERUS AT THE SHOULDER-JOINT.—MR. W. I. WHEELER, in *The Dublin Journal of Medicine*, June 1, 1885, reports three cases in which excision of the shoulder-joint was performed, the operation in every instance resulting happily with great improvement in the motions of the arm. His comments on the operation are as follows:

Excision of the shoulder-joint for disease is not so commonly performed as is excision of other articulations, for the simple reason that disease of the articular structures of this joint is not frequent, and when it does occur it often terminates in ankylosis. Again, it is not very uncommon to find that supposed disease of the shoulder-joint is merely caries of the coracoid or acromian process, and that the osseous structures forming the joint are unimpaired; consequently, the removal of such diseased parts will be sufficient; indeed small sequestra, even in the articulation, may be successfully removed without resecting this joint. But there are other causes, apart from disease, which may demand resection of the scapulo-humeral joint, such as gunshot wounds, old and painful as well as compound dislocations, tumors of the head of the bone not cancerous, compound and comminuted fracture of the articulation.

It makes, however, very little difference for what cause we may have to perform excision of this joint, so long as the treatment be adopted which will prove most beneficial to the patient, and which will endow the hand (to which the other joints of the upper extremity are secondary) with the widest range of usefulness.

With regard to the incisions for this operation several have been advocated—the T, the V, the inverted T, as well as the longitudinal incision through the deltoid muscle, which, in his opinion, is the one calculated to afford the best results, and which is therefore the one he practises. There are several movements in the shoulder-joint—as rotation, abduction, elevation, adduction, and antero-posterior movements—and if the deltoid be cut across, the power of abduction and elevation must be lost, but if its fibres are merely divided the probability is that their movements may be retained with regard to the saving of the long tendon of the biceps. He strongly advocates that, when possible, this should be preserved. He is aware that in many cases of disease it is destroyed and good results have ensued, but he has seen more useful arms and more extensive motion follow when it has remained intact. He has not found it necessary to continue making the counter-openings for drainage. The position of the arm is undoubtedly away from the side and somewhat forward; this favors the contraction of the wound, and the bonds effecting repair are shorter.

EXTIRPATION OF THE GALL-BLADDER.—DR. THIRIAR, reports, in the *Bulletin de Academie de Méd. Belgique*, a case of extirpation of the gall-bladder in a patient who, for a long time previously, had suffered from hepatic colic, which resisted all treatment. No gall-stones were supposed to exist in the bladder, but, acting upon the theory that sooner or later calculi would be formed which, through their inability to escape by the common duct, would be the origin of intrahepatic calculi, he advised the removal of the viscus. The operation was performed as follows: the patient having been anæsthetized, an incision was made over the region of the gall-bladder, a short distance from the costal border, and about six inches in length. An incision almost three inches in length was then made transversely to the fibres of the external abdominal muscle, thus making a T-shaped wound. The abdominal cavity being thus reached, the adhesions found to exist between the colon and the liver were carefully broken up and the gall-bladder was found to be flaccid, of a red color, muscular, and with thickened walls. Very little bile was present in the organ and no concretions in the excretory duct. The gall-bladder was intimately adherent to the duodenum. These adhesions were broken up and likewise the organ was detached from the liver. When the cystic canal had been carefully isolated, a ligature of sublimated silk was thrown round its origin beyond its neck, and a second ligature was placed as a precautionary measure a little higher, after having removed the small quantity of bile which was in with it. Excision was now practised between the two ligatures. The lips of the cystic canal were united by fine sublimated silk sutures, and the wound was carefully disinfected by a solution of corrosive sublimate. The edges of the abdominal wound were united by peritoneal, deep, and superficial sutures of catgut. The operation was entirely successful, being followed neither by vomiting, pain, nor fever.

The third day the patient sat up in bed and in six days she was able to walk. Fourteen days she was entirely well.—*Journal de Médecine de Paris*, June 7, 1885.

REMOVAL OF THE OVARIES IN THE TREATMENT OF UTERINE FIBRO-MYOMATA AND PERSISTENT HEMORRHAGE.—DR. SIMON DUPLAY, in a memoir read before the Academie de Médecine de Paris, June 2, 1885, upon

the removal of the ovaries in the treatment of uterine fibro-myomata and persistent hemorrhage, reached the following conclusions:

1. The ablation of both ovaries is found to be exceedingly beneficial in the case of uncontrollable hemorrhage, symptomatic of the presence of fibrous tumors of the uterus.

2. Although the mortality incident upon the operation is not so great as to be serious, being not in excess of 14.6 per cent., nevertheless, it should not be resorted to until all other therapeutic measures have failed.

3. It is especially indicated in the case of fibro-myomata, great or small, in which hysterectomy is occasionally impossible and always exceedingly grave if not necessarily fatal.

4. In these conditions castration is almost constantly followed by complete cessation of the hemorrhage, and very frequently by a diminution in the volume of the tumor.

5. Castration is contraindicated in very large fibro-myomata and in cysto-fibromata, for which hysterectomy only is applicable.

6. Castration should always be double, and it is advantageous to remove at the same time both the ovary and the fimbriated portion of the Fallopian tubes. —*Archives Générale de Médecine*, July, 1885.

A NEW METHOD OF RELIEVING A COLD.—A writer in *El Siglo Medico* strongly recommends the following as a certain means of relieving the discomfort incident to cold: Pour about a half pint of boiling hot water over about a drachm of pulverized camphor, and inhale the vapors arising therefrom ten to twenty minutes.

Great relief is at once experienced, and after two or three repetitions the discomfort is said to disappear entirely.—*Gazzetta degli Ospitali*, June 21, 1885.

TREATMENT OF SUPPURATIVE MIDDLE OTITIS WITH PERFORATION.—E. GIANPETRO recommends the following treatment of suppuration of the middle ear with perforation of the drum:

℞.—Acid. carbol. cryst. . . . ʒss.
Aquæ dest. . . . . fʒiij.—M.

S.—Keep in flask for external use. By appropriate tube, at every irrigation not less than a quart of the solution should be used, and its application should be made morning and evening. Immediately after the use of the douche, three or four drops of the following mixture should be dropped into the middle ear:

℞.—Glycerinæ, puræ,
Iodoformi . . . . . ãã ʒss.

After cure of the suppurating process, cicatrization of the tympanitic membrane should be promoted by painting the margin of the perforation with iodized glycerine, tincture of benzoin, or with the following mixture:

℞.—Ol. terebinthinæ . . . . ʒiv.
Iodoformi pulverat, . . . gr. xv.—M.

S.—Apply to the margin of the perforation with brush.

Should all effort to cause cicatrization be fruitless, resort should be made to the application of artificial tympanic membrane.—*Gazzetta degli Ospitali*, June 24, 1885.

EPITHELIOMA OF THE CLITORIS: ABLATION AND CURE.—At a meeting of the Société Obstétricale et Gynécologique de Paris, held June 11, 1885, DR. POLAILLON reported a case of epithelioma of the clitoris, in which ablation was performed and resulted in cure.

The patient was a woman, aged seventy years, who entered the hospital complaining of a tumor of the vulva. There was no history or trace of syphilis. The woman pretended to have not been aware of the presence of the tumor for more than three weeks, though she acknowledged that at least two months previously she noticed frequently a purulent fluid and sometimes a little blood, and at the same time experienced pain comparable to the prick of a needle. It is difficult to believe that the vulvar tumor had so rapid a growth. It is probable that it was preceded by a wart or induration which for a long time remained stationary and suddenly took on a rapid growth. The woman was, however, negligent of her person, and her memory seemed much enfeebled.

The tumor occupied the clitoris and the left small lip. It was as large as a hen's egg, mammillated, livid, firm, and excoriated in points. The vulvar secretions, mingled with blood, along with the urine and epithelial débris, moistened its surface and gave rise to a disagreeable odor. The tumor was attached to the pubis at a level with the body of the clitoris, and hung down before the vulvar orifice. The meatus was not involved, and the mucous membrane of the vaginal orifice was normal. The labia majora did not present any suspicious induration, and no involvement of the inguinal glands was evident.

The general health of the patient was good. The tumor continually increased in size, while the pain increased in severity, and operation was decided upon.

After chloroformization, the base of the tumor was cut entirely round by the thermocautery, so as to exceed the limits of the diseased tissue. It was then gradually dissected out with the instrument at a dark-red heat. In spite of such precaution, bleeding was profuse, especially at the base of the clitoris, and five ligatures were required. The tissue removed embraced the whole body of the clitoris, the right lip, the superior portion of the left small and a part of the greater right lip. With a view of restraining hemorrhage by acupressure, three metallic sutures were introduced transversely at the upper portion of the labia majora. A rubber catheter was used in the bladder, and compresses saturated with boracic acid were applied. In three days the catheter was removed, and the fifth day the sutures were removed, hemorrhage being no longer feared. Several times daily the wound was cleansed with the boracic solution. The sixth day, abundant hemorrhage occurred, necessitating the use of an artery *pince*. Cicatrization proceeded gradually, and though the wound was not entirely healed the woman returned home eighteen days after the operation.

Though the patient has never since been seen, M. Polaillon entertains but little hope that the relief afforded will be permanent. In his opinion, epithelioma of the vulva, though rarer than that of the mouth, has the same tendency to recur, and in two cases operated upon, he has observed the return of the disease after a few months, and a similar result seems likely in the third case.—*Archives de Tocologie*, July, 1885.

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CHOLERA PROSPECTS.

THE cholera continues epidemic in Spain, but the press despatches do not indicate its spread in other countries, although it probably exists in the south of France, and any day may bring the news that it has again appeared in Paris. As yet, there are no indications that it has invaded Germany, or that it has appeared in any of the regions from which the main stream of emigration comes to this country, and there is, therefore, good reason to hope that we shall escape a visitation from it this year, or that, at worst, it will only appear at some of our maritime quarantine stations.

The course of the present epidemic in Europe has been exceptional as compared with former outbreaks. For more than a year it has lingered on the shores of the Mediterranean and in the Spanish Peninsula, the furthest point north reached by it having been Paris, where its effects were comparatively small. It does not appear, however, that the disease is any less virulent in type, or that the mortality among those attacked is any smaller than has been the case in previous epidemics, and the meteorological conditions of both the past and the present summer present no peculiarities which would explain the comparative limitation of the disease and its slow spread. All the circumstances seem to indicate that the warning which the nations of Europe received two years ago as to the approach of this disease, and the measures of sanitation which were taken in consequence, have had a good effect.

Of these measures, probably the most important have been those relating to water supply, and those resulting from the general diffusion among the people of the idea that the disease is usually communicated by articles of food or drink, and that, when only such articles are used as have been recently subjected to heat, the danger is small. If to this be added precautions as to disinfection of excreta, and the prompt boiling or destroying of soiled clothing or bedding, which might possibly contain the germs of the disease, there is no doubt that its spread may be greatly hindered, if not entirely stopped. The so-called preventive inoculation of Ferrán appears to have little or no effect as thus far practised.

The work of removing collections of filth, doing away with suspicious sources of water supply, such as wells in large cities, etc., has been greatly stimulated both in England and in this country by the threatened danger, and we probably have yet nine months of grace left for work in this direction, which should be vigorously pushed.

CARCINOMATOUS PYLORUS.

IN THE MEDICAL NEWS for April 11, 1883, attention was called to the different operations that had been practised up to that date for carcinomatous stenosis of the pylorus, and certain conclusions were reached as to the justifiability of the operations and their comparative value. It was then shown that of 60 examples of pylorectomy for carcinoma, 75 per cent. succumbed as the direct result of the procedure; 72.72 per cent. of the survivors suffered from a return of the disease; 27.27 per cent. remained free from recurrence for less than one year; and that not a single patient was permanently cured, or remained well for three years. Of 11 gastro-enterostomies, 72.72 per cent. died, while 3, or 27.27 per cent., survived, but of these 1 succumbed in five months, and 2 were alive at the end, respectively, of two and four months From these data the opinion was expressed that surgical interference in carcinoma of the pylorus should not be countenanced.

We have been led to lay the above summary before our readers in order that they may be enabled to compare the results obtained by surgeons generally with those furnished by VON HACKER from the practice of Billroth, and recorded in the *Beilage Zum Centralblat für Chirurgie*, No. 24, 1885. As is well known, the distinguished surgeon of Vienna has had a far larger experience with gastric surgery than any other individual operator; and although Péan and Rydygier had anticipated him in excising the pylorus, to him must be awarded the credit, if it be a credit, of pushing the operation into prominence. Hence, his experience must be full of interest for the practical surgeon, and particularly for those who intend pursuing their experiments in this field.

For carcinoma, typical circular resection of the pylorus was resorted to 14 times, with 6 recoveries, and 8 deaths, or a mortality of 57.14 per cent. Of the survivors, 3 died subsequently of recurrence at the expiration, respectively, of four, ten, and twelve months, 1 was living with recurrence, at the end of six months, 1 was living with recurrence in the glands of the groin twenty-one months after the extirpation of a nodule from the abdominal wall, her prolongation of life being four years, while the sixth was alive and well twenty-one months after operation. Hence, these cases show a direct mortality of 57.14 per cent., recurrence in 88.88 per cent. of the survivors, and not a single permanent cure.

Of the gastroenterostomies for carcinoma, 5, or 62.5 per cent., died, and in 3 life was prolonged for several months.

From these data it appears that the mortality of pylorectomy and gastroenterostomy in the hands of Billroth has been less than in the practice of surgeons generally, and that his final results have been as bad as those of other operators. In view of these facts, we still adhere to the opinion that we have expressed on several previous occasions, namely, that surgical interference is unwarrantable in carcinoma of the pylorus.

WHY THE NEW ORGANIZATION OF THE CONGRESS SHOULD BE REPUDIATED.

THE action of a large number of the most prominent medical men of this country, in declining official positions in the American Medical Association Congress, is due in part to disapproval of the rules adopted by its managers, and in part to the fact that these managers are not men who should be endorsed to the world as the leaders of the medical profession of the United States.

In secular politics we are familiar with the spectacle of fairly good platforms, with ring candidates thereon, and occasionally we see bad platforms, with fairly good men endorsing them; but here we have such a combination of bad platform and bad leaders that it is difficult to see how any one can support or work under them.

For the platform the New Orleans Meeting of the Association is mainly responsible; for, although it gave no formal instructions to the Committee, it indicated its wish that the Congress should be put on the same basis as the Association itself; while for the selection of the men to organize the Congress the Committee is alone responsible.

It is true that the New Orleans meeting by no means represented the Association, and was specially packed with delegates from two or three neighboring States, whose chief purpose in being present appeared to be to obtain control of the Congress; so that if a majority of the members of the Association express their emphatic disapproval of the action taken, which we have every reason to believe they entertain, this action will appear before the world in its true light, as the work of a comparatively small faction intensely desirous of office, and not as that of the Association as a whole. It is important, therefore, that this disapproval should be manifest and distinct.

No doubt it is a disagreeable duty to make public the mistakes and shortcomings of members of the profession; it is much easier to keep silent, and it is on this unwillingness of the best men to engage in anything like public controversy that the ring politicians rely. This time, however, they have gone too far, and their condemnation is well-nigh universal.

AN IMPORTANT SOURCE OF PROFESSIONAL HAPPINESS.

WHILE perfect happiness may not be the lot of mortals, probably physicians have as much enjoyment as any similar body of learned and useful gentlemen. Apart from professional study and work faithfully done, there are for the doctor, peculiar sources of happiness—wayside flowers which bloom only by his path. One of these sources is in his correspondence, and as this correspondence differs in subjects, so there are varying degrees of happiness which it gives him.

His morning mail, we will suppose, brings him four letters. The first is from the Universal Utopian Life Insurance Company, and encloses a blank containing various questions as to the professional standing and ability of Dr. A——; as to whether he is expert in physical diagnosis, as to his sight and hearing and as to his moral standing—nothing as yet in the form as to the color of eyes and hair, his complexion, and religious and political proclivities; "your answer will be strictly confidential." Not having seen Dr. A—— for many years, and possibly having only the slightest acquaintance with him, one is often sorely tried to answer the questions so that no injustice may be done either to the economical company which in part trusts you to select its examiners, or, it may be, to a most worthy member of the profession, and it is in the effort, and in the accomplishment of this high end that happiness is secured.

The second letter is from a very clever doctor who wishes you to recommend him for an office; he is weary of professional life, and burns with the noble desire to serve his country at Washington, or in a foreign consulship. How delightful it is to assist him in his lofty ambition, especially when he requests you to append your signature to the letter of recommendation, a statement of such titles as you may have, thereby impressing with your consequence the powers that be, who otherwise probably do not know

you from any other son of Adam. The mere accidents or adventitious circumstances of your life are thus used to help him. Of course, it delights one to comply fully with the instructions.

The third letter is from a doctor who desires you to diagnose a case of which he gives you a meagre history, often confused by non-essential opinions and facts, and also to suggest a plan of treatment. With the patient before him and ample opportunity for thorough examination he has failed, but depreciates his own ability, and exalts yours in supposing that you will succeed without such opportunity. The compliment thus paid is very high and is received with great gratitude. In your earnest study of the case as presented by letter, the mind is quickened, knowledge revived or sought, feelings of benevolence and kindness excited—a sincere desire to help your professional brother and a suffering fellow being exercised—and hence an unfailing joy.

But the fourth letter lifts you to the highest altitude of happiness. It comes from a reputable member of the profession who believes that all professional truth is to be reached by arithmetic; statistics are the alpha and omega of his life; only have enough figures properly arranged—columns broad enough and long enough—and the human race will be lifted to dwell forever in the clear and serene light of perfect knowledge.

Undoubtedly statistics have their value in medicine, but they must include only essential facts; they must relate to cases the conditions of which are like, they must be furnished by competent observers, and their accuracy secured by an actual record of observations made at the time of the occurrence of the cases, not trusted to uncertain memory; finally, they must be used, when collected, for the acquisition of truth, not for the establishment of a preconceived theory. How often, however, does the series of questions which the seeker for statistics presents you show that he is endeavoring to sustain a particular plan of treatment, instead of being, for the time, an intelligent, just, and unbiased judge; or else it contains interrogatories, some pertinent, some impertinent, hypotheses probable and improbable, possible and impossible, consistent and inconsistent. Dr. A——, for example, is preparing to read a paper upon diarrhœa before a local, State, or national organization, and his questions run possibly somewhat thus: How many cases of diarrhœa have you seen in your ten, twenty, or forty years professional life? Was heredity a factor in the production of the disease? If your answer is negative, do you not believe it might be in some cases? Do you believe microbes are the essential cause of the disease? If green apples were the exciting cause, specify the number, kind, and size of the apples; if the disease was attributed to "teething," please state the particular teeth concerned. What were the thermometric, barometric, and ozonic observations made when the disease was most prevalent? Do you believe that the induction of premature labor is advisable in some cases of obstinate diarrhœa? If premature labor be induced, would you use two ligatures or one for the cord? Please give the hygienic and therapeutic means which you have found most successful in the treatment of diarrhœa. Have you ever used germicides in the treatment?

Other questions of equal pertinence and importance are presented, and to answer fully all requires a large amount of patience and prolixity, and some pages of manuscript. But patience, prolixity, and pages are cheerfully given in the desire to gratify, it may be, a most worthy member of the profession, and to promote medical progress, while the proud consciousness of having done this affords unspeakable pleasure.

THE PALL MALL GAZETTE'S EXPOSURE.

THE recent exposure by the *Pall Mall Gazette* of a form of horrid licentiousness frequent in London has startled the world. That female virtue should be made merchandise, be bought and sold like the commodities of life in the world's great metropolis, does not speak well for the progress of the race or for the power of Christianity. Paganism in its worst estate could hardly be worse. In our own country when some licentious wretch, maddened by more than brutal instinct, rapes maiden or matron, it is not unusual for the swift vengeance of a mob to inflict death, in some cases preceded by cruel tortures, upon the criminal. But in London we have a similar crime annually committed upon hundreds and even thousands of young girls whose poverty and friendlessness have rendered them comparatively helpless, or who are blindly lured to their ruin—if need be, their very cries of remonstrance stifled, and resistance overcome by force—and English law seems utterly powerless to avenge their wrongs, or secure to others adequate protection. Beer and Britainism, according to Sidney Smith, are inseparable ideas. Licentiousness and London will also become as inseparable if the condition of things made known by the *Gazette* continues.

"The gods are forever just," exclaims Carlyle in his life of John Sterling. Would that this gruff immortal were still in the world to pour upon the perpetrators of these black crimes his fierce invective, and rouse the English nation to demand of their rulers suitable protection for the daughters of the people.

The revelations made by the *Gazette* affect medical men. One of the villainous debauchees who was a liberal purchaser of these unfortunate girls, consigning "to fate worse than death" hundreds of them,

is said to be a doctor. The certificates of virginity which were necessary to secure the sale of the unhappy victims of cruel lust, were given by physicians after examination. That medical men should descend so low as to be the paid panderers to shameless licentiousness, is surely a matter of reproach to the profession. London physicians of repute owe it to themselves, to the profession at large, to society, and to the world to discover, to expose, and to banish forever from their association those who have thus contributed to this damnable traffic.

We do not doubt that good will come from the exposure made by the *Pall Mall Gazette*. The electric light is a powerful aid to morality, and so when the light of knowledge shines in upon London's habitation of cruelty, and nefarious practices are thus publicly known, the intended victim will be warned and made wary, the criminals deterred in some degree, and the crime become less frequent.

Moreover, a purer, healthier public sentiment will be created, a sentiment that will serve the enactment and enforcement of just laws for the protection of female virture, and that will visit with condign punishment, social or legal, if not both, those who sacrifice virgin purity for the momentary gratification of sexual passion.

REVIEWS.

TOPOGRAPHICAL ANATOMY OF THE BRAIN. By J. C. DALTON, M.D., Professor Emeritus in the College of Physicians and Surgeons, New York. 4to. pp. 175. Pl. xlviii. Philadelphia: Lea Bros. & Co., 1885.

When one has a specially dainty morsel he is apt to reserve it to whet a declining appetite. So on our table has lain for some time this exquisite monograph of Dr. Dalton's on the Brain. We have just spent the first of many delightful hours in studying anew the anatomy of this forbidding yet ever alluring organ.

When Dean, in 1863, published his photo-lithographs of the medulla oblongata, they were a great advance on any previous attempts at exact reproduction of sections of the nerve-centres. But twenty years have seen great improvements in our means of embedding and section-cutting and in the heliotype process for reproducing photographs. The result is, such a series of plates that enable us to study, at leisure and with exactness, the details of structure of the brain seemingly impossible of reproduction, and, in fact, we believe abandoned as hopeless even by the Smithsonian.

The author has given us three series of plates, first, of the various surfaces of the brain, with three sagittal sections of one hemisphere; secondly, horizontal sections; and thirdly, vertical transverse sections—each of the last two at five millimetres' interval. We only regret that a few more plates have not been added, showing systematic sagittal sections of one-half of the brain at five millimetres apart, to complete the series.

The first plate, in its relief, is a wonderful fac-simile of the brain. As in each of the others, it is faced by an outline explanation-plate in addition to the text, which facilitates its study. The delicacy of tinting is shown by nearly all of the others, but especially by those showing faint outlines of the various gray nuclei and the gray substance of the cerebellum.

No one can study the brain accurately without this work, and especially no teacher should fail to possess a copy. It inaugurates almost a new era in anatomical text-books on this subject. As a specimen of book-making it is exquisite. We are both glad and sorry to learn that the moderate edition is already very nearly exhausted.

SOCIETY PROCEEDINGS.

AMERICAN OTOLOGICAL SOCIETY.

Eighteenth Annual Meeting, held at New London, Conn. July 14, 1885.

(Specially reported for THE MEDICAL NEWS.)

THE Eighteenth Annual Meeting of the American Otological Society was held at the Pequot House, New London, Conn., on Tuesday, July 14, 1885, beginning at 10 A.M., THE PRESIDENT, DR. CHARLES H. BURNETT, of Philadelphia, in the Chair.

Twenty-seven active members and one honorary member were in attendance.

THE PRESIDENT announced the decease of two members, Dr. John H. Dix, of Boston, Mass., who had been a member since 1868, and Dr. E. T. Ely, of New York, who had been admitted to the Society in 1880.

DR. S. SEXTON, of New York, presented a paper on

INFLAMMATION OF THE ATTIC OF THE TYMPANUM.

He considered the disease under two headings, acute and chronic inflammations of the attic. The latter form, presenting itself as deep sinuses, containing polypoid tissue, crusts, pultaceous matter, etc., leading from the inner end of the canal up into the attic, into the antrum, and sometimes through the membrana flaccida, is often the result of acute inflammation in early life. A minute anatomical description of the atticus tympanicus was given.

Acute inflammation of the attic may follow catarrh of the head, the exanthemata, the entrance of fluids propelled along the Eustachian tube in bathing or from the use of the nasal douche. The frequent occurrence of inflammation of the attic from these causes is readily accounted for, when we remember that the Eustachian tube at its tympanic orifice opens by a free sweep into the attic as well as into the antrum. Irritating fluids seem to be better borne in the lower than in the upper part of the tympanum. Inflammations of the attic may be simultaneous with, consecutive to, or independent of, the inflammation of the antrum. It is the more serious from the fact that swelling of the mucous membrane clogs the outlets and prevents drainage. In such cases the membrana flaccida is red, the vascular turgescence extending above into the external auditory canal, and sometimes downward along the short process of the malleus. The inflammation may extend beneath the margo tympanicus of the auditory plate, followed by effusion of serum and blood, pressing away the membrana flaccida and integument of the canal, producing

a bulging sac, so great sometimes as to conceal entirely from view the membrana tympani, and may even entirely fill the canal, and present at the lumen as a purplish tumor. In some cases rupture of some bloodvessels of the tympanic plexus takes place, producing sudden extravasation.

Periostitis of surrounding parts may occur and extend along the surfaces of the canal, the mastoid or squamous portion of the temporal bone. In nearly all cases inflammation extends into the antrum and mastoid cells, or those overlying the external auditory canal or in the tegmen. If the escape of secretions into the antrum or the Eustachian tube is prevented, the case is more severe, and extension to the cranial cavity more to be feared. Inflammation of the antrum often persists after the tympanum has healed, drainage taking place through the Eustachian tube or by a sinus through the cortex of the mastoid.

For treatment, Dr. Sexton relies upon drainage and the employment of such constitutional remedies as tend to check the inflammation and prevent the formation of pus, as mercury and calx sulphurata, etc. Owing to the difficulty of making an accurate differential diagnosis between the pains of pachymeningitis and neuralgic pains of otitis media, the surgeon should be very cautious about trephining the mastoid, when pain is the only indication. If pachymeningitis has appeared, it is evidently useless to trephine.

DR. D. B. ST. JOHN ROOSA, of New York, said that the remedies mentioned are not in common use in the way he recommends them. He has used mercury in doses of $\frac{1}{10}$ to $\frac{1}{5}$ grain, and also sulphide of calcium, but without any favorable effect. He considers a warm room, a good nurse, taking care of the bowels, and local measures, as the most important, while the external treatment may be of an expectant nature. He asked Dr. Sexton to describe a case, indicating the manner in which he would use these remedies.

DR. SEXTON answered that he gives the remedies in small doses, but frequently repeated. The moment there are symptoms of purulency, he uses the calcium sulphide, which, he believes, controls the process. It has been used by Ringer and Otis in suppurative affections in other parts of the body. Under its use, Dr. Sexton has seen congestion and swelling over the mastoid disappear.

DR. J. A. ANDREWS, of New York, showed an illustration of a case in which the inflammation was most intense in the upper part of the tympanic cavity, and a perforation was established between the mastoid antrum and the external auditory canal. The latter was very much swollen, and showed a fluctuating in the superior portion, which he incised, liberating a considerable quantity of blood and pus. A good recovery was made. Two months later almost the entire canal was occluded by a membrane, which has since disappeared without operative treatment.

DR. POMEROY asked Dr. Sexton whether he believed the administration of mercury in these cases relieves pain when there is pain, and, if so, what is the theory of its action.

DR. SEXTON replied that he had never used it exclusively for that purpose, neither did he recommend it for this purpose. He would rather employ aconite or pulsatilla, especially the latter. He also feels certain that the sulphide of calcium, when given alone, would relieve pain.

DR. AGNEW thought that when there is acute otitis media it is desirable to cut it short as soon as possible. In a case of beginning otitis media, he would give fifteen grains of calomel and a Turkish bath, if accessible. He asked Dr. Sexton what his treatment would be in a case of acute otitis media catarrhalis in an infant six months old.

DR. SEXTON said he would ascertain the general condition, with regard to catarrhal trouble, dentition, previous attacks of inflammation of the ear, etc. If there were an accumulation, he would not hesitate to let it out. But in the majority of cases at this age rupture has already occurred when the patient comes under observation. If there were suppuration, he would give calcium sulphide; if simple catarrh, he would give mercury.

DR. C. J. KIPP remarked that nothing had been said of inflation which will relieve the pain of the middle ear. When there is protrusion of the membrana tympani, incision will give relief to the suffering.

DR. S. THEOBALD had used the solution of atropia, 4 grs. to the ounce, and in combination with the internal administration of cathartics, with great benefit. He also spoke very highly of 15 grain doses of pyrophosphate of soda.

DR. C. J. BLAKE, of Boston, spoke of the important role played by the reduplication of the mucous membrane in the upper portion of the tympanum, which he has found in 15 or 20 per cent. of 200 cases examined, and which may tend to retain secretions. In some cases of acute congestion of the upper portion of the tympanic cavity he has observed a history of over-strain and nervous exhaustion, suggestive of the acute pneumonia found with precedent history of nerve-exhaustion. In these cases an incision along the line of the posterior fold is followed by improvement in the symptoms.

DR. SEXTON said, in conclusion, that from his experience during the last ten years he would give up local applications rather than the internal remedies he has recommended in his paper.

DR. W. W. SEELY, of Cincinnati, read a paper on

THE TREATMENT OF CHRONIC OTITIS MEDIA.

He felt constrained to condemn the slurring of some cases of chronic otitis media catarrhalis by specialists in various ways, as by putting the catheter of the balloon in the hands of the patients. He claimed that this class of cases is always amenable to treatment, and that only time and patience are necessary to manage them.

He believed the attention of the general profession is becoming too much centred on the Eustachian catheter as the only means of opening the tubes. Often catheterizing does more harm than good; and some application of boric acid and vaseline, or, still better, of yellow oxide of mercury, will open the tubes when the catheter has little or no effect. He said that salves have almost, if not quite, supplanted all other applications for nasal and naso-pharyngeal troubles.

He concluded his remarks with the following:

1. That only experience of sufficient length of time (often lasting over months) in each case can determine whether treatment shall be continuous (daily) or interrupted—*i. e.*, perhaps daily for a week, followed by an interruption of some weeks or months.

2. Only experience in each case can inform us whether treatment is to be entirely directed to the middle ear or entirely to the nasopharynx, or combined against both.

3. Only experience in each case can inform us whether injections into the tympanic cavity are called for. Under this head it was stated that direct medication either of the middle ear or nasopharynx, as routine treatment, is unwise, till simple inflation has failed.

4. Mechanical dilatation of the tubes is rarely necessary or advisable. Only in extremely dry states of the tube is dilatation followed by much good success.

5. Hearing tests are not reliable, and hence patients with great deafness, great loss of bone-conduction, etc., should not be sent away till the test by trial has been gone through with.

6. Simple inflation failing, the greatest attention should be given to the nasopharynx, even though it be in an apparently fair condition.

7. Syringing, douching, and swabbing the nasopharynx should be abandoned.

DR. CHARLES H. BURNETT, of Philadelphia, read a paper on

THE RELATIONS BETWEEN CHRONIC CATARRHAL OTITIS MEDIA AND CHRONIC RHINITIS.

(See page 57.)

DR. C. R. AGNEW, in the discussion on these two papers, remarked that he thought there was an anatomical objection to the use of salves, and that it was impossible to apply them to the whole of the diseased surface. He has used the nasal syringe for twenty years, and is not prepared to accept the law that it should be abandoned. He is more willing to agree with Dr. Burnett, but believes that more stress should have been laid upon the most important part of the treatment, *i. e.*, the hygienic part.

DR. ST. JOHN ROOSA thought, with the last speaker, that the principal and the only benefit to be obtained in the majority of these cases is by proper hygiene. He does not believe it necessary to continue our examination very long, or repeat them very often, to determine whether or not we may expect to give the patient any relief. If he finds diminished bone-conduction, he thinks it is unnecessary to go on treating the patient.

DR. E. WILLIAMS, of Cincinnati, had been in the habit of freely using the Eustachian catheter, and frequently introduces with great benefit to the patient a flexible bougie through the catheter.

DR. H. KNAPP said that when lately suffering from a catarrhal affection, causing sometimes considerable annoyance, he had employed, with considerable advantage, a salve of iodoform and vaseline.

DR. SEELY had adopted the use of salves as a routine treatment, and has had more satisfaction than by any other treatment. They remain longer in contact with the affected parts than solutions, thus giving a more decided effect.

AFTERNOON SESSION.

DR. S. SEXTON presented a *Conversational Tube* for the aural instruction of deaf-mutes. By means of this tube the pupil will hear his own voice and compare it with the voice of the teacher.

INSTRUCTION OF DEAF-MUTES.

PROF. A. GRAHAM BELL, Honorary Member of the Society, called the attention of the members to the large number of children who were classed in institutions as deaf-mutes, but who, under proper treatment and education, could be made simply hard-of-hearing members of society. He also referred to the importance of otologists' formulating a list of causes of deafness, to which principals of institutions might refer for the proper legislation in institutions for deaf-mutes, while as now the legislation only gives the causes as obtained from parents or friends.

DR. CHARLES J. KIPP, of Newark, N. J., reported

A CASE OF FATAL EAR DISEASE, BEGINNING AS A CIRCUMSCRIBED INFLAMMATION OF THE EXTERNAL AUDITORY CANAL.

The patient was a married woman, twenty-three years old. She was first seen nine months before her death. Since previous confinement, occurring four months before she came under observation, she had suffered occasionally with severe pains in and about the left ear. There were swelling and redness of the posterior upper wall of the external canal. No perforation and no otorrhœa. Under the use of leeches, instillations of morphia, and inflation of the middle ear, there was decided improvement when she passed from under observation. Eight or nine months later the pain again appeared shortly after confinement, which was found to be due to furunculosis of the external meatus. There was no evidence of disease of the tympanum or the middle ear. An incision was, however, made in the membrana tympani, but nothing escaped. The swelling of the meatus soon subsided, but the patient continued to complain of severe headache. The pain, however, was not in the mastoid region, nor was there any tenderness on pressure. She gradually failed and soon died.

At the autopsy there was found evidence of intense inflammation over the entire extent of the arachnoid and pia mater. There was a collection of pus immediately over the posterior surface of the petrous portion of the temporal bone. Pus was also found on the pons Varolii. A small abscess was found in the anterior part of the left lobe of the cerebellum, near its junction with the pons. The mastoid cells were filled with pus, and only a thin exudation was found in the middle ear.

DR. BURNETT reported a case similar in many respects, in which the patient died from what was diagnosed as cerebral abscess. No autopsy could be obtained.

DR. E. E. HOLT, of Portland, Maine, reported on the present condition of the patient from whom the

TERATOID TUMORS

were removed. This case was fully reported at the meeting two years ago. For one year the patient remained free of the disease, when it reappeared, and since has progressed rapidly.

DR. CHARLES H. BURNETT presented a paper on

THE LOCAL USE OF COCAINE AND BRUCINE IN DISEASES OF THE EAR.

He had tried both the sulphate and the hydrochlorate of cocaine in painful affections of the ear to produce anæsthesia. He finds neither efficient when the pain is

due to inflammation in dense tissues of the external auditory canal, as in furuncles of this part, nor when acute inflammation occurs in chronically thickened periosteal and mucous tissues in the tympanic cavity. The hydrochlorate of cocaine, however, is efficient to induce local anæsthesia in 4 per cent. solution, in cases of not excessive congestion of the skin of the fundus of the auditory canal and in the membrana flaccida of the drum-membrane, as is observed in acute coryza, and attended by pain of a not continuous nor intense variety.

The solution may be applied to the inflamed tissues either by mopping it gently upon the affected portion or by soaking a small dossil of cotton and laying it upon the seat of inflammation, both procedures being done under perfect illumination of the fundus of the auditory canal, by means of the forehead mirror. But solutions of cocaine are not competent to produce local anæsthesia in the external auditory canal profound enough to permit painless incisions into it. Local anæsthesia in the membrana tympani preparatory to paracentesis is not required, as the operation is not painful enough to demand local anæsthesia.

With regard to brucine, Dr. Burnett thinks that either in solutions of the alkaloid or of its nitrate or sulphate it has a useful future in the treatment of pain in the ear due to inflammation of the skin in the meatus and auditory canal, and in acute inflammations in chronically inflamed periosteal and mucous tissues of the fundus of the canal and the tympanic cavity.

DR. E. E. HOLT, presented a paper entitled

DOES COCAINE HYDROCHLORATE, WHILE RELIEVING THE PAIN IN ACUTE OTITIS MEDIA, PROLONG THE CONGESTION?

This question occurred to the writer several times where he has used the remedy for relief of pain in the middle ear. He was satisfied that while cocaine relieves the pain and for a while holds the inflammation in check, after its effect has passed off the inflammation goes on unabated, even loss of hearing seems to be more intense.

DR. THEOBALD said that he had found that in the nasal passage the drug asserted the same effect. Though at first it relieved congestion, it was greater afterward.

DR. ORNE GREEN had derived very little benefit from its use.

DR. D. WEBSTER had seen decided benefit in the removal of polypi of the meatus.

EVENING SESSION.

DR. H. KNAPP, of New York, read a paper on

THE DESIRABILITY OF ADOPTING A UNIFORM METHOD OF EXPRESSING THE RESULTS OF TESTING THE ACUTENESS OF HEARING.

He said he differed from the opinion expressed by Bazold in a recent article published in the last number of the *Zeitschr. für Ohrenheilkunde*, that the ordinary speech and still more the whispered voice are the best hearing tests at present at our command. He thinks this test alone is insufficient for a correct estimate of the patient's hearing, as we would fail in many cases to detect the beginning of deafness, that stage when treatment is more important and more successful than in the later stages. The voice test should be supplemented by the test of the watch or Politzer's hammer. He, therefore, rejects Bezold's proposition to use the whispered voice as a uniform hearing test. Politzer's hammer he considers an excellent test, but, as Roosa remarks, it has no advantage over the watch. It has moreover the disadvantage, that its hearing distance, 15 metres, is too great.

Dr. Knapp proposes the use of the watch and the voice combined, the result to be registered in the manner proposed by Dr. Grout and himself thirteen years ago, as fractions of the normal standard, and gave a series of symbols, which he submitted to the Society for their consideration.

DR. ROOSA proposed that Dr. Knapp be requested to present the proposed system of recording the hearing to the meeting of German Naturalists at Strasbourg, next year, which was unanimously adopted, as also a motion by Dr. Orne Green, that a committee be appointed consisting of Drs. Knapp, Roosa, and Prout, to report in 1886 on a uniform system of recording the hearing power.

DR. D. B. ST. JOHN ROOSA, of New York, read a paper on

PRESBYKOUSIS.

This term was applied to senile impairment of hearing not dependent upon inflammatory affections. It comes on after the age of forty or fifty. Such persons do not hear well in a noisy room, and hear the watch badly, but they can hear quite well in a quiet room. In inflammatory diseases the person can often hear pretty well in a noise, while in a quiet room he hears badly. Three conditions go together, diminished bone conduction, hearing worse in a noise, and the disproportion between hearing the voice and the watch.

DR. KNAPP thought that the term presbykousis, if used in analogy with presbyopia, was not a good one, as it would indicate a diminished range of accommodation of hearing which would refer more to pitch than to anything else. What is meant is senile involution occurring in every organ.

DR. ORNE GREEN had been considering the subject some time and had arrived at the same conclusions as Dr. Roosa.

DR. HOLT had examined a large number of persons with ear disease who claimed they could hear better in a noisy than in a quiet room, but was unable to find that this was correct. He referred to a report of such observations made two years ago.

DR. ROOSA defended his position with regard to the term presbykousis, he said, with regard to hearing a noise, that he was convinced that patients with tympanic disease could hear better under such circumstances, and cited the example of a lady who heard with difficulty under ordinary circumstances, but in a boiler shop she heard the ordinary voice distinctly, while her husband with normal hearing, could only hear loud-spoken words.

DR. E. DYER, of Newport R. I., made a verbal report of a case of *Fistula Auris Externa* in a girl of fourteen relieved by galvanocautery.

The following papers were read by title:

Two Cases of Neglected Ear Disease in Infants, Resulting in Death, by Dr. S. Sexton, of New York.

A Case of Chronic Otitis Media Suppurativa Resulting in Cerebellar Abscess, with the Autopsy, by Dr. O. D. Pomeroy, of New York.

Otitis Media Suppurativa; Mastoid Disease and Pyæmia; Mastoid Operation; Recovery, by Dr. Graham Bacon, of New York.

Dr. Sexton exhibited a glass ear syringe and an ear forceps with several attachments.

The following officers were chosen for the ensuing year.

President.—D. J. S. Prout, of Brooklyn.

Vice-President.—Dr. S. Sexton, of New York.

Secretary and Treasurer.—Dr. J. J. B. Vermyne, of New Bedford, Mass.

Committee on Membership.—Drs. W. H. Carmalt, Ch. J. Kipp, S. Theobald.

Publishing Committee.—Drs. J. J. B. Vermyne, C. J. Blake, J. O. Green.

A vote of thanks to Dr. C. H. Burnett, the retiring President, for his excellent services was unanimously adopted, and the Society then adjourned.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-first Annual Meeting, held at Pequot House, New London, Conn., July 15 and 16, 1885.

(Specially reported for the MEDICAL NEWS.)

WEDNESDAY, JULY 15TH.—FIRST DAY.

MORNING SESSION.

THE PRESIDENT, DR. WILLIAM F. NORRIS, of Philadelphia, called the meeting to order at 10 A. M. After an address of welcome the usual committees were appointed.

DR. C. R. AGNEW, of New York, read an interesting paper on

A NEW OPERATION FOR THE REMOVAL OF A DISLOCATED CRYSTALLINE LENS.

The lens is transfixed by thrusting an instrument, consisting of two needles of a certain length, fastened in a Sand's needle-holder. A flap wound is made in the cornea, somewhat more extensive than in the ordi nary cataract operation. After the iridectomy the now fixed lens is removed with a scoop, without loss of vitreous. The procedure is simple, and Dr. Agnew thinks one need feel no hesitation in performing the operation. It is especially useful where the vitreous is watery. Dr. Agnew calls the instrument a bident. It was used on one case only, which resulted favorably.

DR. D. WEBSTER, of New York, followed in a paper in which negative results followed this same operation, admitting that it was on account of not being able to manipulate the instrument properly. The lens was delivered with a scoop with a slight loss of vitreous. The patient obtained $\frac{20}{C}$ vision. Dr. Webster remarked that the invention of the instrument will save many eyes which are now condemned to enucleation.

DR. H. KNAPP thought the operation an injurious one, and said that he had no trouble in extracting a dislocated lens by digital manipulation.

DR. E. WILLIAMS, of Cincinnati, expressed his appreciation of the invention of the instrument, but could not agree that the modus operandi is a good one at all times.

DR. H. W. WILLIAMS, of Boston, remarked that the removal of a dislocated lens is not difficult. When such cases present themselves, he usually dilates the pupil *ad maximum*, places the patient on his face, and allows the lens to gravitate into the anterior chamber. It can then be removed by a simple operation.

DR. ROOSA, of New York, explained (by request) his method of removal of a cataractous lens in its capsule. Forty-one cases operated upon showed two failures, which were, however, due to other causes.

DR. GEORGE C. HARLAN, of Philadelphia, then read a paper on

RAPIDLY PROGRESSIVE MYOPIA PERMANENTLY CHECKED BY SECTION OF THE EXTERNAL RECTUS.

He related the clinical history of a patient who, at the age of 16 years, wore a sph.—$\frac{1}{24}$ to render distant objects visible. Within the last year it was found that the myopia had increased, and asthenopic symptoms became very annoying. After an external tenotomy in one eye, the asthenopia was alleviated, and gymnastics of the muscles was instituted, which produced relief. Dr. Harlan remarked that the insufficiency could not have been the result of the myopia, as it was not affected by full correction; nor could spasm of the accommodation be a possible factor, as the degree of myopia was precisely the same. The asthenopia was not relieved by thorough mydriasis produced by atropia solution.

DR. HARLAN also reported

TWO CASES OF SUBCONJUNCTIVAL LUXATION OF THE LENS.

In the first case, the result of a blow with a fist, the lens was dislocated just above the cornea, in a vertical meridian. It was fixed in its position, the iris was drawn into the ruptured sclerotic, leaving the pupil irregular, and shreds in the vitreous. The eye was quiet. The lens was removed by making a horizontal cut through the tumor—at an examination three years later the eye was quiet and afforded useful vision.

The second case was a woman who received a blow from a piece of wood which she was cutting with an axe. The accident was followed by inflammation of the iris and sclera. It was decided to remove the encysted lens at once, which was done, and negative results followed.

Dr. Harlan's deductions were that in exceptional cases in which the eye remains useful after a subluxation of the lens it may be well to think twice before proceeding to operate.

DR. O. F. WADSWORTH, of Boston read a paper on *A Case of Luxation of Lens beneath Tenon's Capsule.*

DR. JOSEPH A. ANDREWS, of New York, read a carefully prepared paper on the

TREATMENT OF PURULENT CONJUNCTIVITIS.

The treatment advocated was based upon the belief that the contagious element of this disease is a variety of micrococcus. He related a case in which he had successfully inoculated the human conjunctiva with the seventh generation of a pure culture of the gonococcus. This is the first instance in which the human conjunctiva has been successfully inoculated with the gonococcus. He showed an instrument which he had devised for washing out the superior conjunctival cul-de-sac. The instrument consists of an eye-speculum with hollow arm, the claw having numerous perforations through which

fluid is forced by means of a fountain syringe connected with the instrument by means of a fine rubber tube five feet long. He found the bichloride of mercury in solution (1 : 10,000) serviceable, but apt to irritate; also the boracic acid solution (6 per cent.); carbolic acid solution 2 to 3 per cent. was a favorite, the latter remedy having the additional advantage that it inhibits the movement of the white blood-cells. Irrigation should be maintained for ten to fifteen minutes. The nitrate of silver, Dr. Andrews thinks, is a very valuable and almost indispensable addition. After the application of the silver he applies an antiseptic dressing to the conjunctiva consisting of vaseline and boracic acid, or carbolic acid. He laid especial stress upon the importance of maintaining the irrigation of the conjunctiva by means of the instrument above referred to.

DR. F. BULLER, of Montreal read a paper on

MELANOTIC SARCOMA OF THE ORBIT,

relating the clinical history of a patient who had the growth removed successfully with no recurrence elsewhere.

DR. E. E. HOLT offered for consideration some results obtained in the compilation of

A FIRST SERIES OF 1000 CASES OF REFRACTION.

He said he was in the habit of recording all measurements connected with the prescribing of glasses. As a result he had found in 1000 cases the average pupillary distance to be 60 mm. The average of other measurements was given and the importance of the oculist determining and designating them and having the optician follow the prescription accurately, was dwelt upon.

DR. C. R. AGNEW, of New York, read an abstract of a paper entitled

SIMULATED BLINDNESS,

based on the case of a young girl who simulated blindness for some time. The ophthalmoscope revealed no lesion, her pupils were sluggish however. A sudden alarm of fire produced sudden restoration of vision.

DR. THEOBALD had seen a similar case in which the pupils were active.

DR. B. E. FRYER, of Kansas City, read a paper on

BONY (CYSTIC) TUMOR OF ORBIT CAUSED BY AN ENCLOSED FOREIGN BODY.

He said that this case of bony orbital tumor is of interest from its pathology and from its diagnostic bearing on orbital growths generally. The patient was a colored boy, six years of age, free from hereditary taint and well developed. The tumor upon examination was found to be located just above the superciliary ridge, extending outwards as far as the external angular process of the frontal bone and projecting forward at the orbital edge about an inch higher than the bone on the other side. The tumor included the whole line of the ridge and extended downwards and backwards into the orbit, displacing the eye downwards, forwards, and outwards very markedly. The growth which was quite solid was too hard apparently for cartilage, and yet not dense enough for bone. The only history obtainable was that the boy two years previously had his forehead cut by a piece of wood thrust at him by another boy. The wound was slight, healed rapidly, and at time of examination showed no scar. The tumor began to appear after the injury and had been growing steadily since. No pain. An operation was performed May 1, 1885; a dense tumor, continuous with the frontal bone, of a whitish-yellow color and quite opaque, was found. This tumor proved to be a bony cyst enclosing a foreign body (piece of wood), one-fourth of an inch long, one-eighth of an inch broad, and one-twenty-fifth of an inch thick, with a small quantity of pus surrounding it. The tumor was successfully removed.

DR. MITTENDORF suggested that the wound injured the periosteum which, being displaced, formed the bony wall surrounding the foreign body.

DR. HARLAN called attention to the fact that inflammatory products may simulate a tumor of the orbit, and cited a case.

AFTERNOON SESSION.

DR. S. D. RISLEY, of Philadelphia, reported a group of seven cases, in addition to those already published by him, of

HYPERMETROPIC PASSING OVER INTO MYOPIC REFRACTION,

both conditions having been carefully determined after prolonged mydriasis. In five cases the meridian of lowest corneal curvature had been maintained. In two there had been a rotation of 10° in the principal meridians. Choroiditis was present in all the cases.

DR. RISLEY also reported a case of *Temporal Coloboma of the Choroid*, illustrated by a drawing.

DR. W. S. DENNETT read a paper on *The Examination of Spectacles*. This paper was illustrated with numerous drawings. He also exhibited the electric light ophthalmoscope. The light was about three-quarter candle power and was adjusted to the handle of the ophthalmoscope, the light being placed at such an angle as to allow its rays to be projected into the eye of the patient, giving an illumination not unlike the Argand burner. Its practical application is appreciated in the wards of a hospital.

DR. HOWE exhibited

AN ARRANGEMENT FOR THE DEMONSTRATION OF REFRACTION AND ACCOMMODATION.

This consists of two bands of thin metal, bent in such a manner as to represent the outlines of a double convex lens, and passing through it are two jointed rods, representing the rays of light ordinarily figured as passing through such a lens and joining at its focus; the flexible bands were attached to each other above and below, so that by approaching or separating the sides, they could be made to show less or greater convexity. The rods representing the rays of light were jointed near the centre in such a manner that, while the two halves could be placed in such a direction as to show the light as entering parallel to the axis of the lens, the other two portions could be bent to a point to show the convergence of rays at the focus. By alteration in the position of these rods, and also in the forms of the bands representing the lens, all the different variations of the laws of refraction, and the changes in accommodation, can be demonstrated to a class of students.

DR. BULL read a paper on *Two Cases of Lateral Hemiopia*, both the result of traumatism.

DR. HASKET DERBY, of Boston, reported

TWO CASES OF PENETRATION OF THE EYEBALL BY SCISSORS DURING THE OPERATION FOR STRABISMUS.

Case I.—A sharp-pointed scissors used which penetrated the globe, causing a slight loss of vitreous; wound healed slowly; patient was convalescent in six weeks; $\frac{7}{10}$ vision was ultimately obtained.

Case II.—A similar accident happening. A good recovery, with no detect of vision.

DR. H. KNAPP stated that he had met with three accidents of this kind. The functions of the eyes were not interfered with, the wounds healing by first intention. One case developed tenonitis, the cornea becoming complicated; divergent strabismus developed.

Drs. Williams, Mittendorf, and Buller each witnessed this accident.

DR. L. WEBSTER FOX, of Philadelphia, witnessed an operation for strabismus in which the sclera was punctured, a large quantity of vitreous escaping, producing prolapsus bulbi. Panophthalmitis developed, for which the eyeball was enucleated.

DR. E. E. HOLT, of Portland, Me., read a paper on

STRABISMUS; ITS CORRECTION WHEN EXCESSIVE, AND IN HIGH DEGREES OF AMBLYOPIA.

He had employed advancement of the weakened attenuated muscle, in connection with tenotomy, in certain cases of squint, after tenotomy alone had failed to correct the deviation.

DR. SEELY, of Cincinnati, in a paper on

THE TREATMENT OF STRABISMUS INTERNUS,

said that each year, with its added experience, had strengthened the conviction that early operations (up to 10th, 12th, or 15th year) are questionable, and possibly should be entirely abandoned. He combated the idea that "cross eyes" never became straight without an operation. He said, certainly nothing is better established than the relation between ametropia and strabismus, and all recognize the necessity of glasses for preventing the recurrence of the squint after tenotomy. Dr. Seely remarked: It must be strange if any man who has been in practice, even a decade of years, and has not seen divergence in cases said to have been perfect corrections of the internal squint for even a long period subsequent to the tenotomy; at any rate, if not divergence, insufficiency. Every one knows the possibility of correcting cases of squint by setting aside the ametropia by means of glasses. He did not believe many children now of four to six years of age were operated upon, in spite of all the teaching.

His early conviction, that something should be left for time and glasses, long since has grown into an absolute law of action, for he is thoroughly persuaded that immediate perfection means later in life insufficiency, or even divergence. He thinks that operative interference should not be the full consideration, but be looked on as an adjuvant to be resorted to later on if necessary.

He summed up his views as follows:

1st. That with our present light, routine operative interference is wrong.

2d. That to correct thoroughly the deviation in young children by operative interference is extremely liable to subject them in after-life to insufficiency or external squint.

3d. That a later period of life, if anything, favors better results from operative interference.

DR. RICHARD H. DERBY, of New York, read a paper on

ECTROPION OF UPPER AND LOWER LID, BLEPHAROPLASTY BY THE ITALIAN METHOD,

based upon a case in which, in consequence of a severe burn in childhood, there was complete ectropion of the lower lid, the upper lid was everted and its margin firmly adherent to the region of the brow; the eyelashes and eye-brow intermingled. The eye from constant exposure was the seat of frequent inflammation. About the eye and over the entire half of face, including the right half of forehead and temple was dense, firm, cicatricial tissue. For the relief of this condition there was no tissue which could serve for sliding flaps, and the tissue adjacent to the eye was so devitalized that a Wolfe's operation offered little prospect of success from the nature of the tissue which would surround the transported flaps. It was, therefore, determined by Dr. Derby to make a blepharoplastic operation according to what is known as the Italian method. The patient was a strong man and assented to the proposed operation which was done under ether. An incision was made along the margin of both upper and lower lid within one mm. of their edges. The incision was carried deeply enough to free both the upper and lower lids from their firm attachment. The margins of the lids were scored with the knife and then united by sutures. To fill this space now made over both upper and lower lid a flap four ctm. wide and eight ctm. long was dissected from the anterior and inner surface of the biceps region of the arm on the same side with the operated eye. This flap was divided by a linear incision in its length leaving two-thirds for the upper and one-third for the lower lid. The arm was now carried up to the head and put in position with the forearm extended over the head and there secured by bandage. The flaps were secured in place. The arm was then made fast by water glass bandage. Four days later the pedicle of the flap was cut through and the arm released. No accident followed. The patient has now a good upper and lower lid and fully-protected eye.

DR. W. F. NORRIS, exhibited for DR. CHARLES A. OLIVER, of Philadelphia, *A New Series of Metric Test Letters* based upon those of Snellen and De Wecker.

DR. B. JOY JEFFRIES suggested, in his article on

PLASTIC OPERATIONS WITHOUT PEDICLE,

the employment of the prepuce from circumcised children for the flaps. Also the possibility in some cases of not using flaps, and by the application of carbolized oil or a similar agent preventing the too-rapid healing of the wound.

EVENING SESSION.

DR. JAMES L. MINOR, of New York, read a paper on

REMOVAL OF A PIECE OF STEEL FROM THE CRYSTALLINE LENS WITH THE ELECTRO-MAGNET.

A small bit of steel which had been in the lens for a month was successfully removed with the aid of an

electro-magnet. The peculiarity of the operation consisted in magnetizing the instrument (strabismus hook), which was carried into the interior of the eye in search of the foreign body, by holding the point of the electro-magnet in contact with the shank of the instrument, throughout the operation. The point of the magnet holds the instrument firmly in contact with its tip which acting as a fulcrum allows a variety of movements and considerable delicacy of manipulation. This device, Dr. Minor says, enables the surgeon to operate with magnetized instruments. Reference was also made to an antiseptic method of dressing the eye which consisted in dusting powdered boric acid over the linen pad which covered the eye, previously to applying the cotton-wool packing for the bandage. The conjunctival secretions dissolve the acid and thus keep the eye under the constant influence of the drug.

DR. H. KNAPP, of New York, gave his experience, in a short paper, on

NINE SUCCESSIVE CASES IN WHICH THE ELECTRO-MAGNET WAS USED FOR THE EXTRACTION OF CHIPS OF IRON FROM THE INTERIOR OF THE EYE.

The cases were operated on during the last three and a half years. In two, the chip of iron was located in the iris; the one for two days, causing inflammation; the other for seventeen years. Quite recently both were successfully removed without any deterioration of the eye. In the seven remaining cases the foreign bodies were in the vitreous chamber, had produced cataract, and consequently could not be seen. In three cases the attempt at extracting them with the magnet did not succeed, and the eyeballs were enucleated. In four cases the chips of iron were brought forth at the first, second, or third introduction of the tip of the electro-magnet. In all of these four cases the recovery was good. All four are still cataractous; in two the form, size, and tension of the globe are not changed, and perception of light is good in the whole field; in the two others the globe is slightly smaller and softer, and the field of vision is defective, corresponding to the wound made for the extraction of the foreign body. No subsequent irritation developed while the patients were under Dr. Knapp's care.

DR. R. H. DERBY read notes and showed photographs of a case of *Congenital Malformation of the Upper Lid of an Infant*, with a history of an injury to the mother during pregnancy.

DR. A. MATHEWSON, of Brooklyn, read a paper on a

CASE OF EPITHELIOMA OF EYELID REMOVED BY APPLICATIONS OF BENZOLE AND CALOMEL.

The patient, aged 50 years, suffered with a tumor on the right lower lid, which was first noticed as a wart-like growth three years before, latterly rapidly increasing and presenting a new granulating surface covered with an easily removable concretion. Careful microscopic examination by an expert showed it to be an epithelioma. By frequent dusting of calomel on the raw surface, over which had previously been painted the common benzole, the growth entirely disappeared. A few months ago, a small granular elevation made its appearance at the edge of the cicatrix, where the first growth developed. Similar treatment produced like results.

DR. LUCIEN HOWE, of Buffalo, exhibited a manometer, and read a paper on

THE PULSATING VARIATIONS OF INTRAOCULAR TENSION AS MEASURED BY THE MANOMETER.

In calling attention to the variations of intraocular tension dependent upon the circulation, some attention also was given to the various forms of the manometer, or instrument for measuring the intraocular tension. The earlier instruments consisted simply in a U-shaped glass tube connected by a flexible rubber tube to a trocar. When the trocar was introduced into the anterior chamber of the eye, the intraocular pressure would tend to force the fluid through the tube, and show the degree of pressure by a rise in the opposite column of the U-shaped tube. This was imperfect, for the reason that when the aqueous humor escaped from the eye it was at once in an abnormal condition. The double manometer, described by Grasser and Holzke, obviated this difficulty. In this, however, there was an imperfection in the trocar, which was rather complicated and liable to get out of order. An improvement was accordingly suggested in having a stopcock attached to a needle of the hypodermic syringe, and this Dr. Howe found to serve the purpose much better than any heretofore used. The animal best adapted to this class of experiments is the cat, on account of the deep anterior chamber.

Dr. Howe stated that in the early experiments with the manometer it was noticed that the intraocular tension varied with the heart's action. In addition to this, the author called attention to the fact that these variations in the pressure, as indicated by the manometer, correspond to pulsations which can be seen with the ophthalmoscope in the vessels on the interior of the animal's eye. In other words, if the same thing holds in the human subject, we must infer that when pulsation is seen on the interior of the eye, there is also a variation of intraocular tension, which, although not enough to be detected by the touch or by any ordinary instrument, still exists. This connection between pulsation and pressure is a demonstration of the cause of venous pulse in the eye, as explained theoretically by Donders. Dr. Howe observed that after the introduction of the needle there was at first pulsation, but after a short time this ceased, the eye evidently adjusting itself to this unusual condition.

The experiments referred to were made by Dr. Howe in the laboratory of Prof. Zuntz, of Berlin, Germany.

DR. SAMUEL THEOBALD, of Baltimore, reported

THREE CASES OF PROGRESSIVE ASTIGMATISM OF TRAUMATIC ORIGIN.

Astigmatism of traumatic origin, he remarked, is observed not infrequently to undergo changes in degree, but it has been commonly held that congenital astigmatism does not alter in degree, though the refraction of the eye, as a whole, may undergo marked changes The cases which he reported, he thought, proved that there were some exceptions, at least, to this rule.

The first case related was that of a young man, who, with a high grade of hypermetropia, had an astigmatism in each eye, which required for its correction a cyl.$+\frac{1}{20}$. The case was observed at intervals during a period of twelve years, and during this time the astigmatism

increased until finally a cyl. $+\frac{1}{13}$ was needed to correct it.

The second case was one of compound myopic astigmatism in a young man, in which there occurred along with an increase of the myopia, a growth of the astigmatism during a period of sixteen years from $\frac{1}{16}$ to $\frac{1}{8}$.

In the third case, a simple myopic astigmatism, in a physician, 25 years of age, requiring a cyl. $+\frac{1}{24}$ in one eye, and a cyl. $+\frac{1}{36}$ in the other, for its correction; changed in five years so that a cyl. $+\frac{1}{13}$ respectively, were needed.

Dr. Theobald regretted that the examinations had not all been conducted under a mydriatic, as they would then be more likely to carry conviction to the minds of those disposed to be sceptical, regarding the progression of astigmatism, but he did not believe the results would have been materially different had this been done. Such cases are not of frequent occurrence, but even if they happen rarely, it is important that the fact should be recognized. As the increase of astigmatism is probably due to change in the corneal curvature, the phenomenon should be met with more frequently in the yielding myopic than in the relatively stable hypermetropic eye.

DR. H. S. SCHELL, of Philadelphia, read a paper on

LIPOMATOUS PTOSIS,

under which title he described cases of accumulation of fat in the upper eyelid. Four cases, all occurred in young women of 18 to 25 years of age. The patients were well nourished but not fat. The eyelids were so heavy that they covered one-half or more of the cornea in spite of the greatest effort of the levator muscle.

Patients all sought relief on account of the deformity. The fat, drooping lids gave a disagreeable, and, at the same time, a somewhat sinister and sensual expression to the face. Cases were all operated on by making a horizontal incision the length of the lid, half way between the margin and brow, and dissecting out the fat, which lies between the skin and the orbicularis. The ptosis usually disappeared in from one to four weeks. In one case the affection returned, and in the second operation a considerable mass of fat was removed from the upper part of the orbit.

DR. H. KNAPP, of New York, read a paper on

THE TREATMENT OF CORNEAL INFILTRATION WITH THE ACTUAL CAUTERY.

The use of the actual cautery, he remarked, in destructive corneal processes, was introduced by Dr. Martinache, of San Francisco, in 1873; by the introduction of cocaine it has received a new impetus. Recent publications on the subject by Drs. Nieden, Schweigger, Grüning, and others, recommend its use. Dr. Knapp has used it, under cocaine, in nineteen cases. The majority were cases of pustular keratitis; one with hypopyon was that tedious form known under the name of scrofulous band. The recovery in this group of cases was rapid and highly satisfactory. Four cases of ulcus serpens, one deep with a high degree of hypopyon were treated. The latter was cured in five weeks, the others were benefited, though their recovery was not so rapid. In a case of acute suppuration of an old prolapse of iris, a single cautious application of the actual cautery did not prevent the development of panophthalmitis so common in such cases. In two cases of beginning suppuration of the edges of a cataract extraction wound, the application of the actual cautery, proposed by Abadie, had no apparent effect, the milder case recovered, the severer one developed into panophthalmitis.

Dr. Knapp, from the study of the incidental literature and from his own, though yet limited, experience, feels confident that the actual cautery will prove of great value in ophthalmic therapeutics.

DRS. E. WILLIAMS and O. F. WADSWORTH obtained good results by applying carbolic acid (pure) to the ulcers.

Several members stated that they scraped away the destructive tissue and in this way brought about resolution.

DR. L. WEBSTER FOX, of Philadelphia, presented some

CLINICAL OBSERVATIONS.

First. Congenital cataracts successfully removed in a patient sixty years of age. On February 4, 1884, Harriet H——, negress, presented herself at the Eye Clinic of the Germantown Hospital, suffering with cataracts. The lenses were opaque with well-marked deposits of calcareous concretions situated in the anterior or visible portions of the lenses.

Upon examination good projection of light obtained. The history elicited was that since birth the vision had not changed, simply being able to distinguish day from night or the light of a lamp, or the shadow of a dark object when brought directly in front of the patient's face. Feeling assured of the sensibility of the retina, an operation for the cataract in one eye was suggested, and was performed. The lens was successfully removed in its capsule with a Critchett's spoon. There was a small loss of vitreous, which was fluid. The eye was closed immediately, and the wound healed without reaction; the eye being bathed daily with a mild astringent lotion, but the lid was not disturbed.

At the end of eight days the bandages were removed when it was found that the wound was closed and a key-hole iridotomy existed which was perfect in outline and showed a clear media. The patient was astonished, she could see objects several feet distant but was quite at a loss to understand the visual phenomena. She was quite nervous from the effect of the shock and started violently and closed her eyes as if with fear. She was unable to name any object placed before her but readily distinguished it when her hand was placed upon it. A few moments afterward she readily distinguished a watch which was shown her. This was distinguished not by its form, but by its ticking. At this time wools of different colors were placed before her and a certain one given to be matched, which was done without confusion, proving the accurate sensibility of the retina to the most delicate tints, although not a name was known to the patient. After several days the object and wool test was made again. When looking at a distance—for she could recognize objects at a distance, the refraction of the eye before the operation being myopic to eleven dioptrics—she tried to grasp the objects, and a flock of sparrows were supposed to be tea-cups. Owing to her first impression of distances she was for quite a time afraid to walk with her eyes open, the floor appear-

ing at a distance. A red and black color produced pain in the eye-ball while green and white were soothing. After the bandages were removed she was allowed the freedom of a moderately lighted room to become accustomed to those objects about her, as well as to learn to measure distances; she repeatedly refused to walk, although the nurse assured her that no danger would befall her in the effort.

The patient was soon able to associate the name with the object and at the end of some weeks, in the meantime using her eye constantly, she was able to mention all the objects in the ward of the hospital, but at times would make mistakes quite as ludicrous as the birds with the tea-cups. Her vision without glasses is equivalent to $\frac{20}{XX}$ and with sph. +1 she is able to see fine stitches which would be equal to J $\frac{2}{10''}$. In January of this year the right eye was operated on; no reaction followed, and she is now able to see perfectly with both eyes.

Her color fields were accurately measured at different times and found to correspond to Landolt's measurements. The fundus oculi presents a peculiar picture. The disks are oval in shape, while the distribution of vessels are few in number and do not extend beyond the equator—they run into capillaries and were not recognizable with the ophthalmoscope. The lenses were found to be only two-thirds the size of an ordinary adult lens. Instead of being convex in shape, they were found to be almost spheroidal. The patient is now employed as a general servant in the hospital.

Obs. II.—Recovery of vision after eighteen years of blindness. Vision after operation $\frac{5}{cc}$ increased by a glass = sph. + $10\underline{D} \supset$ cyl. + 3, D ax. 180 $\supset$ cyl. + $2\underline{D}$ ax. 50° (ground in one) = $\frac{20}{XX}$. Reading sph. + $14\underline{D} \supset$ cyl. + 1.50 ax. 50° J$\frac{1}{10}$

R. L., woman, 37 years, at three years of age was injured in the left eye, two years subsequently sympathetic ophthalmia developed, leaving the right eye with qualitative perception of light only. At various times she had operations performed by distinguished surgeons with negative results.

On June 21, 1884, at the Germantown Hospital, an iridotomy was performed; a large ovoidal-shaped pupil with a clear media was the result of this operation.

This patient, who had at one time good vision, was annoyed at the "confused look" of surrounding objects. The erythropsia (seeing everything red) was so great that dark glasses were ordered to be constantly worn. After three months this retinal trouble disappeared, and objects assumed a natural color.

After repeated examination the formula above referred to was prescribed, the glasses giving almost perfect vision. The patient (educated at a blind asylum) has presented me with her first impressions, in writing, of the living and inanimate objects surrounding her, and her mental conception of objects conveyed through the medium of touch, was as unlike that received through the now restored organ of vision as day from night.

Dr. Fox then related the history and treatment of five cases of retinitis pigmentosa.

These cases were treated by electricity (constant current five cells), and showed marked improvement in fields of vision and central vision. One patient after non-treatment for nine months (purposely) still retains the fields gained by the treatment. Dr. Fox found five cells sufficiently powerful to produce good results. The positive pole is placed over the eye, lid closed, and negative on the nape of the neck.

Obs. III.—The clinical histories of two cases of monocular optic neuritis, in which the histories are irrelevant, but good acuity of vision was obtained by small and continued doses of mercury. Both cases were young girls about sixteen years of age.

Obs. IV.—Sarcoma of iris successfully removed and $\frac{20}{XXX}$ given by cyl. + 3.50 ax. 45 $\supset$ cyl. — 4 ax. 165°. The growth was noticed as far back as July, 1884. After this time glaucomatous symptoms became manifest. Iridescent colors and increased tension were observed. The vision at one of these subacute attacks became nearly indistinct. After an interval of two months patient had another attack, the eye becoming blind and remaining so for six hours. The acuity of vision in the interval constantly growing worse, and the tension becoming more manifest at the time of the operation, February 11, 1885,

V. R. E. $\frac{20}{LXX?}$ no improvement c glasses (sarcoma).

V. L. E. $\frac{2}{C}$ injured one.

The wound was made precisely like the old flap operation for cataract. With an iris forceps the tumor and a large piece of the iris were seized, which were then excised; good results followed. The choroid of the left eye was ruptured by a blow in 1872, which accounts for the low degree of vision.

THURSDAY, JULY 16TH.—SECOND DAY.

MORNING SESSION.

DR. W. F. MITTENDORF, of New York, read a paper on

PNEUMOPHTHALMOS, OR AIR IN THE VITREOUS HUMOR.

He remarked that the entrance of air into the interior of the eye will occur at times during an operation. In such cases the air may get into the anterior chamber, whence it can be removed with ease. It is entirely different when air gets into the vitreous chamber. The accident is of such rare occurrence, that, so far, no description of it has been given. Dr. Mittendorf reported two cases. The first case was that of young blacksmith, who was wounded by a piece of iron penetrating the sclera and lodging in the vitreous humor. After a few hours it was found that the foreign body, surrounded by a clot of blood, had settled at the bottom of the eye, the vitreous had cleared up, and behind the lens, and a little above it, three air-bubbles were seen by means of the ophthalmoscope, one of these appeared to be the size of a small pea, the two smaller ones were about as large as a rape-seed. They resembled the air-bubbles as seen under the microscope, their centre being bright, and the outline so well defined and surrounded by a sharp black border, that their recognition

was not difficult, although none of the gentlemen that looked at the case had ever seen anything like it in the interior of the eye.

The foreign body could not be removed by means of the magnet, and it was decided to let it remain. The eye was bandaged, and at an examination the following morning it was found that the bubbles had coalesced, and a large bubble was now located at the posterior pole of the lens, the patient having remained quietly on his back sometime before examination. The upright position caused the bubble to float upwards, and settle at the dome of the eye. Forty-eight hours after the accident every trace of the air-bubbles had disappeared.

The second case was the result of a drilling accident, and represented in outline the same characteristics.

In order to determine the exact appearance of air in the vitreous humor, Dr. Mittendorf experimented upon rabbits' eyes. Four had air introduced into the vitreous humor by means of a hypodermic syringe, while four were subjected to introduction of oil by the same means. Nearly all these experiments were successful. The difference between the air-bubbles and oil-globules was marked. The oil-globules were highly refractive, the contour decidedly darker than the air-bubbles, which were colorless. Dr. Mittendorf's conclusions were:

1. The entrance of air into the vitreous body can occur only after a part of the contents of the vitreous chamber has escaped.

2. It is favored by the entrance of a foreign body which makes a large, irregular, and gaping wound in the sclera.

3. In order to allow air to enter the vitreous humor, this must either be quite fluid, or its anatomical arrangement must have been disturbed by the entrance of a foreign body, or the air must have been attached to the foreign body, and thus carried with it into the eye.

4. The air in the vitreous humor appears like an air-bubble as seen under the microscope; it is more or less round, highly refractive in the centre, and has a sharply defined black outline.

5. Oil-globules in the vitreous present a similar appearance, but they look heavier, and are not perfectly colorless, and their outlines are darker; they are also more glistening in the centre.

6. Air-bubbles will be completely absorbed within two or three days; their presence is not a source of great danger to the eye. Oil-globules last longer, but their presence is likewise non-irritating.

DR. W. F. NORRIS, of Philadelphia, read a carefully prepared paper on

THE RELATION BETWEEN THE EARLIER STAGES OF GRAY DEGENERATION OF THE OPTIC NERVE AND INCREASE OR DIMINUTION OF THE PATELLAR TENDON REFLEX.

The clinical histories of the patients were discussed, and their fields of vision shown.

DR. E. WILLIAMS remarked that he had had patients in whom he failed to trace the atrophy to spinal trouble. He felt sure that taking large and repeated doses of quinia would produce amaurosis.

DR. MYLES STANDISH, of Boston, read a paper on

A CASE OF TUBERCLE OF THE IRIS.

The patient, a girl of 14 years, her parents living, and without any history of syphilitic or tubercular disease, was, however, anæmic, and poorly developed. A growth, 2 mm. in diameter, of pink color, with small vessels on its surface, projected from the surface of the iris near its ciliary border. There was posterior synechiæ, which were not broken by mydriatics. In one month the growth had doubled in size, the iris remaining perfectly quiet. The eye was removed at the Massachusetts General Hospital, and a microscopic examination of the tumor was made by an expert, who pronounced it tubercle of the iris.

DR. G. C. HARLAN exhibited for Dr. Jackson, of Philadelphia,

A NEW REFRACTION OPHTHALMOSCOPE.

The main features of this instrument is the absence of Rekoss's disk, the lenses are placed in two narrow slides, which move vertically behind the mirror and in front of the disk, thus obtaining a range from sph. + 9 D to sph. — 14 D inclusive, with an interval of 1 D.

DR. W. S. DENNETT, of New York, showed

THE STOKES LENS FOR MEASURING ASTIGMATISM.

These lenses were supported by a frame in such a way as to be easily adjusted in the place of the ordinary trial frame, and he gave in detail the simplest method of fitting glasses by it. Dr. Dennett showed that the instrument was so easily manipulated that the patient could assist greatly in the examination. The strength of cylinder and inclination of its axis could be read from the instrument, and the method of correction for the spherical element which entered into the Stokes combinations, was so simple that any one who would write it on a tag and attach it to the machine, would probably never need to refresh his memory by looking at the tag.

DR. C. J. KIPP, of Newark, N. J., reported

A CASE OF CONGENITAL COLOBOMA OF IRIS, CHOROID, AND RETINA,

in which inflammatory glaucoma developed late in life; with an anatomical description of the eye. The eye was enucleated to relieve pain. The coloboma was found to extend through to the optic nerve. The ciliary bodies were intact, but irregular as to the arrangement of their processes. There was a large ectasia of the sclerotic, over this the choroid and retina were wanting. There was a deep glaucomatous excavation of the optic nerve.

DR. O. F. WADSWORTH, of Boston, reported an interesting

CASE OF DOUBLE OPTIC NEURITIS AND OPHTHALMOPLEGIA FROM LEAD POISONING,

complicated with typhoid fever. He remarked that the patient, a boy 9 years of age, had suffered with obscure febrile symptoms for several weeks, and movements of the left eye had been observed to be imperfect. When first seen by Dr. Wadsworth there was pronounced optic neuritis in both eyes, vision was much diminished. No lateral movements of left eye, movement downward impaired; movement of right eye outward defective. Probable diagnosis, tumor in region of pons.

The movements of the eyes became still more impaired and vision sank. The patient developed fairly distinct symptoms of typhoid; spleen and liver both enlarged. Lead was found in the urine, and diagnosis of tumor abandoned. Treated with potass. iod., general

conditions became normal; the neuritis passed into atrophy, leaving too little vision to count fingers; the movements of the eyes were completely restored; the lead disappeared from the urine.

DR. B. JOY JEFFRIES, of Boston, offered the following resolution concerning

STANDARD COLOR SIGNALS,

which was unanimously adopted:

Resolved, That the Society would again express most hearty approval of the International Commission, twice recommended in a bill reported by the Naval Committee of Congress, and endorsed by the International Medical Congress of London, 1881; to consider and agree upon standard colored lights and signals, etc.; and the visual power and color sense of officers and sailors.

The Society would particularly support the International Congress, and vote that "every government, especially the maritime governments, should be requested to place one or more members on the commission, and chiefly experienced naval officers and medical specialists.

The Secretary is hereby directed to transmit this vote to Congress.

DR. SAMUEL THEOBALD, of Baltimore, offered the following resolution concerning the

NEW ORGANIZATION OF THE INTERNATIONAL CONGRESS.

Resolved, That it is the sense of the American Ophthalmological Society, that the action of the American Medical Association, at its late meeting in New Orleans, and of the enlarged committee appointed at that time to make arrangements for the International Medical Congress, in overturning much of the carefully planned work of the original committee appointed at Washington, for the same purpose, was unwise, and not to be defended, unless, possibly, upon technical grounds; and this Society hopes that none of its members will endorse the action of the enlarged committee by accepting official positions at its hands.

DR. E. WILLIAMS, of Cincinnati, voted against the measure, on account "of not wishing to goad a sick horse." He understood that he was appointed by the new committee president of the Ophthalmological Section, but up to the present time he had not been notified, and hence had not yet tendered his resignation.

DR. KIPP spoke against the resolution.

The resolution was adopted by a large majority.

The meeting was highly satisfactory to the members present, a larger number participating, and a larger number of papers were read than at any previous meeting. It was decided to hold the Twenty-second Annual Meeting at the same place in July, 1886.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

THE INTERNATIONAL MEDICAL CONGRESS AND THE MEDICAL PROFESSION OF CINCINNATI.—The members of the profession in Cincinnati and its vicinity who were appointed to office by the Chicago Committee, on July 17th adopted the following preamble and resolution:

Whereas, The recent action of the American Medical Association with reference to the organization of the proposed International Medical Congress was, we believe, detrimental to the best interests of the Congress, therefore,

Resolved, That we, the undersigned, nominated members of the Congress, hereby decline to serve.

P. S. Conner,	J. C. Reeve,
F. Forchheimer,	W. W. Seely,
S. Nickles,	J. T. Whittaker,
Thad. A. Reamy,	E. Williams.

MORE RESIGNATIONS FROM THE NEW ORGANIZATION.—We are informed that Dr. W. A. Hardaway, of St. Louis, has declined the Presidency, and Dr. J. Nevins Hyde, of Chicago, the Vice-Presidency, of the Section of Dermatology and Syphilis in the new organization of the Congress; that Dr. E. Williams, of Cincinnati, declines the Presidency of the Section of Ophthalmology; and that Drs. T. A. Reamy, of Cincinnati, and J. C. Reeve, of Dayton, Ohio, have declined Vice-Presidencies in the Section of Obstetrics and Gynecology.

Drs. George M. Sternberg and R. W. Shufeldt, U. S. A., E. Van de Warker, of Syracuse, N. Y., and William Lee, of Washington, J. M. Keating and George E. De Schweinitz, of Philadelphia, have also declared their intention to decline office.

Dr. N. Senn, of Milwaukee, has resigned from the General Committee.

THE INTERNATIONAL MEDICAL CONGRESS AND THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—At the annual meeting of the American Ophthalmological Society held at New London last week, the following resolution was adopted.

Resolved, That it is the sense of the American Ophthalmological Society that the action of the American Medical Association at its late meeting in New Orleans, and of the enlarged Committee appointed at that time to make arrangements for the International Medical Congress in overturning much of the carefully planned work of the Original Committee appointed at Washington for the same purpose, was unwise and not to be defended, unless, possibly, upon technical grounds; and this Society hopes that none of its members will endorse the action of the enlarged Committee by accepting official positions at its hands.

PUBLIC OPINION ON THE WORK OF THE CHICAGO COMMITTEE.—The exclusion from representation in the Congress of the great bulk of the profession, including a large number of the brightest lights of American medicine, seems, not to put it too harshly, like a piece of unwarrantable assumption.

The effect of this action of the Committee remains, of course, to be seen, and can only be conjectured. That it has not met the approval of even all of the appointees of the Committee has already transpired. . . . . Perhaps and doubtless, the thirty-eight States and territories of this Union will be able to get along without the gentlemen whom the Committee have excluded, and who have excluded themselves; but can a meeting with such material left out be said to be thoroughly representative of the medical profession of the United States? The

action of the European profession in the premises, remains to be seen.—*Medical Age* (Detroit).

The past week has brought no news calculated to reassure those who are anxious for the success of the International Medical Congress and the credit of American medicine. Nearly all the gentlemen appointed on the organization from Boston, Philadelphia, Baltimore, and Washington have withdrawn, while many prominent men in New York (aside from those forced off) and from the West will, we learn, either formally withdraw, or informally decline to take any part in the work.

The comments of the medical press are almost uniformly condemnatory of the folly and short-sightedness of the American Medical Association. . . . . A meeting of the American Medical Association, entirely revoking its New Orleans work, and restoring the old Committee, with its liberal policy, might, perhaps, save the Congress. We see, at present, no other way.—*Medical Record.*

It has unquestionably become the duty of every well-wisher of the Congress, no matter where he may live, to decline any participation in the emasculated affair, which its present organization must necessarily lead to.—*New York Medical Journal.*

The very fact that the appointees of the original Committee in all parts of the country have acted with such unanimity in withdrawing from prominent positions in connection with the Congress, and have repudiated the action of the present Committee on Organization, is sufficient evidence that there were strong and unimpeachable reasons for their conduct in this matter. . . . . The withdrawal of the leading members of the profession from all connection with the present organization tells its own story, and very plainly says, the Congress must be reorganized on some other basis than the one proposed by the American Medical Association if it is to be a success. In other words, the Association has so seriously blundered in this affair that it must resign its authority as a leading spirit in the reorganization of the Congress. Indeed, it seems to us that the only course now left open to the Association is to abstain from further participation in the arrangements for the Congress, and that it leave this matter in the hands of the medical profession at large, which can be depended on to reorganize the Congress on a successful basis.—*Maryland Medical Journal*, July 18, 1885.

The spirit of dissatisfaction has not been quieted, and the outlook for a harmonious reception of our foreign brethren is decidedly dark.—*Northwestern Lancet*, St. Paul.

No sooner were the proceedings of the Chicago meeting made known than the members of the profession in the eastern cities interested in the organization met and expressed their emphatic disapproval of the action by unanimously refusing to have anything to do with the Congress under the present *regime*. We happened to be in Philadelphia on the occasion of the meeting in that city, and found that the leaders of the profession were of one mind in their determination to withdraw. Similar resolutions have been passed in Boston and Baltimore, and we may say that the majority of the men, eminent in scientific medicine and surgery in the United States, have decided to hold aloof from the Congress. When we ask why they take this serious step, we learn that they have, in the first place, a deep distrust of the American Medical Association as an organization which could satisfactorily carry out such an undertaking, and they have a still deeper distrust of the success of any congress where the best known scientific medical men of the country have been replaced by nominees such as Drs. Cole, Shoemaker, and others. All, too, resent the insult offered to such a veteran as Henry I. Bowditch, of Boston, who has devoted half a century to the advancement of the best interests of the profession in the United States.

What the result will be it is difficult to predict, but it is hard to see how a Congress can be held without such men as those who have signified their intention of resigning. It would be like a Congress in London without Paget, Lister, Jenner, Gull, Hutchinson, etc., and we fear that when the profession in Europe hears of these dissensions, and the withdrawal of the very men they would be most anxious to meet, many who otherwise would have come will elect to stay away.—*Canada Medical and Surgical Journal.*

There is a very unfortunate discussion going on at present in professional circles in America, which, it is quite possible, may turn out disastrously for the International Medical Congress, which it has been decided to hold in Washington in 1887. It will be remembered that a small Committee of the American Medical Association was nominated by the Executive of the Copenhagen Congress, with full power to add to their number, and to act on behalf of their professional brethren. Carrying out their mission, they chose as colleagues twenty-eight leading American practitioners, especially selected on account of their standing in the profession, and drew up the programme which has already been published. Subsequently, when the Committee reported to the meeting of the American Medical Association at New Orleans, exception was taken to their proceedings on the plea that they had exceeded their powers, and had no commission to act on behalf of the Association. The jealousies that had been roused amongst those who had been passed over in the coöptative selection were worked upon by two or three pushing wire-pullers, and, in the end, resolutions were passed revising the work of the Committee, and substituting a Committee of thirty-eight men, selected from the different States and territories, for those added to their number by the original Committee. At a subsequent meeting, the results of which we are daily expecting to hear, the subject was again to come under consideration, and we learn that it was the intention of all the leading practitioners in the States to withdraw from the Congress, if the decisions of the original Committee were not treated with more respect. We sincerely hope that the profession in America will strenuously support their recognized leaders; otherwise they will make an exhibition of themselves to the world, and, besides imperilling the future success of those international gatherings which have hitherto been conducted with so much harmony, will distinctly lower the respect in which the profession is held throughout the world.—*Medical Times and Gazette* (London).

IMPORTANT, IF TRUE.—The *Maryland Medical Journal*, in its issue of last Saturday, states that "it is currently rumored in this city that the International Medical Congress and the American Medical Association have been captured by one of the New York schools, and will

be run under its exclusive patronage. 'Madam Rumor' is not always an unreliable witness."

THE MUHLENBERG MEDICAL SOCIETY, of Tennessee, was organized in Central City on Wednesday, July 9, 1885. Dr. J. G. Bohannon was elected President; Dr. W. E. Irvin, First Vice-President; Dr. J. T. Woodburn, Second Vice-President; Dr. J. W. McDowell, Recording Secretary.

The Society will meet the first Wednesday in each month at some town in the county. The Society will next meet at South Carrollton, August 5th, at 10 o'clock A.M. Dr. J. T. Woodburn, of Bremen, will read a paper on "Cholera Infantum."

TYROTOXICON, CHEESE POISON.—At the meeting of the Michigan State Board of Health, July 14, 1885, DR. V. C. VAUGHAN presented a report of his investigations on poisonous cheese. It is well known that cases of severe illness follow the eating of some cheese. Such instances are of frequent occurrence in the North German countries and in the United States. In England they are less frequently observed; while in France, where much cheese is made and eaten, these cases are said to occur very rarely. A few years ago the reputation of a large cheese factory in northern Ohio was destroyed by the great number of cases of alarming illness from eating its cheese. Dairymen know this cheese as "sick" cheese.

Kinds of Cheese that are Poisonous.—A German author says: "The numerous kinds of soft cheese, prepared in small families, or on small farms, are generally the cause of the symptoms; while it is quite exceptional to hear of symptoms arising from the use of cheese prepared in large quantities." Some two years ago, a family in Alpena, Michigan, was poisoned by eating of cottage cheese; the cheese which poisoned so many in this State last year, was made at one of the largest factories in the State, and by an experienced cheese-maker. The old foul-smelling cheeses, such as Limburger and Schweitzer, have never been known to be poisonous.

Effects of the Cheese.—The symptoms produced by "sick" cheese, as reported by German and American physicians, agree quite closely, and are as follows: Dryness of the mouth and throat with a sense of constriction, nausea, vomiting, diarrhœa, headache, sometimes double vision, and marked nervous prostration. In rare instances the sufferer dies from collapse. As a rule, recovery occurs in a few hours, or at most after a few days. The symptoms of cheese-poisoning and those of sausage, canned-meat and fish poisoning, are very similar. Though death results more frequently from the others mentioned than from cheese-poisoning.

Appearance of the Cheese.—The samples of cheese examined had no peculiarities of appearance, odor, or taste, by which it could be distinguished from good cheese. It is true that if two pieces of cheese—one poisonous and the other wholesome—were offered to a dog or a cat, the animal would select the good cheese. But this was probably due to an acuteness of the sense of smell possessed by the animal and not belonging to man. Indeed, if a person tasted a cheese, knowing that it was poisonous, he might detect a sharpness of taste which would not ordinarily be noticed.

Have we any Ready Means of Recognizing Poisonous Cheese?—There is no certain means, aside from a chemical examination, by which a poisonous cheese can be distinguished from a wholesome one. The most reliable ready method is probably that proposed by Dr. Vaughan a year ago, and it is as follows: Press a small strip of blue litmus paper (which can be obtained at any drug store) against a freshly-cut surface of the cheese. If the paper is reddened instantly and intensely, the cheese may be regarded with suspicion. When treated in this way, any green cheese will redden the litmus paper, but ordinarily the reddening will be produced slowly and will be slight. If the piece of cheese be dry, a small bit should be rubbed up with an equal volume of water, and the paper should then be dipped in the water. Dr. Vaughan does not regard the above test as free from error, but as the most reliable ready means now known. Every groceryman should apply this test to each fresh cheese which he cuts. The depth of the reddening of the paper may be compared with that produced by cheese which is known to be wholesome.

Effects on the Lower Animals.—Dogs and cats, at least, are not affected by eating poisonous cheese. This is probably due to the fact that they do not get enough of the poison from the amount of cheese which they eat. The pure isolated poison in sufficient doses would undoubtedly produce upon the lower animals effects similar to those produced on man.

Nature of the Poison.—Dr. Vaughan has succeeded in isolating the poison, to which he has given the name tyrotoxicon (from two Greek words which mean cheese and poison). It is a product of slight putrefaction in the cheese, which probably occurs in the vat, as the curd has been known to poison a person. By this slight putrefaction, or excessive fermentation, as it may be called, a large amount of butyric acid is formed, and this in the presence of the casein of the cheese is capable of developing a poison. Different samples of poisonous cheese contain different amounts of the poison. The same weight of cheese from one cake furnished three times as much poison as that from another cake. The poison was obtained in long, needle-shaped crystals, which are freely soluble in water, chloroform, alcohol, and ether. The smallest visible fragment of a crystal placed upon the end of the tongue causes a sharp, stinging pain at the point of application, and in a few minutes dryness and constriction of the throat. A slightly larger amount produced nausea, vomiting, and diarrhœa. The poison is volatile at the temperature of boiling water, and for this reason even poisonous cheese may be eaten with impunity after being cooked. The substance has also a marked, pungent odor, and through the nose one can obtain sufficient of the volatile poison to produce dryness of the throat. This is true, however, only of the isolated poison. In the cheese the taste and odor of the poison are both modified to such an extent that they would not be recognized, as has already been stated.

The first step in the study of cheese poisoning has now been taken, by finding out what the poison is. Efforts will be made to ascertain the means for preventing its formation.

FERRÁN'S CHOLERA INOCULATION.—The pilgrimage of Professor Brouardel and his companions to the feet of the great Western Sage, who professes to stamp out

the most formidable of modern epidemics, has produced the most startling and unexpected results. Dr. Ferrán positively refused to make known his method of preparing the fluid, the inoculation of which, he claims, preserves from cholera. He would not allow the French Commission to carry off even a single tube of vaccine matter for the purpose of examining it under the microscope, and refused to sanction any experiment outside of his "laboratory." The place dignified with that high-sounding name possesses none of the modern appliances of science, not even an apparatus for regulating the temperature of the stove in which the cholera virus is cultivated for attenuation. The single microscope available within its precincts only possesses a magnifying power of 700 diameters, while in all modern laboratories of bacteriology magnifying powers of 1200 or 1400 diameters are considered indispensable. We must admire the genius of investigation which led Dr. Ferrán, with such imperfect means, to achieve such portentous discoveries; but we cannot laud the spirit in which he told the French Commissioners that he could not surrender his secret without "a guarantee." The meaning of this expression was clearly indicated by the Doctor himself, in a letter officially addressed to the (French) Minister of Trade, in which, after deploring the indifference of his native country, which, unlike France and Germany, grants no pecuniary reward to its men of science, he openly says, "All the fame in the world would not preserve my children from poverty if death should overtake me."

It sems fair that, before granting Dr. Ferrán a "*substantial*" reward, the Spanish Government should make sure that there exists a "*substantial*" discovery. The French Commission could not solve the problem, as the Doctor had no microscopical preparations to show them, and would not grant them permission to make any of their own. They had, therefore, no means of controlling Dr. Ferrán's startling announcements as to the mode of reproduction of the cholera bacillus, nor of making experiments upon living animals. All they could do was to attend the Doctor in some of his "*vaccinations*," and to examine the statistical data which seem to plead in favor of his system. Dr. Ferrán inoculated, in presence of the Commissioners, a certain number of Sisters of Charity. He injects the contents of a full syringe (one cubic centimetre) into the back part of each arm. No antiseptic precautions are taken, and the air contained in the syringe is not even expelled before the injection takes place. The results are a slight malaise, with lowering of the temperature; no fever, no vomiting, or diarrhœa. It must be allowed that, on the whole, no bad effects seem to follow the injection. The blood of persons inoculated contains no abnormal elements.

The statistical data, which at first sight appear to confirm Dr. Ferrán's statements, are, upon further investigation, found to be altogether unreliable. The population of Spanish towns is always understated, in order to avoid taxation; the number of deaths is also understated, especially in times of cholera, in order to avoid the much-dreaded sanitary "cordon." No reliance, therefore, can be placed upon the figures, which seem to prove that vaccinated and revaccinated subjects are less liable to infection than others. Besides, it is well-known that in all countries cholera is less frequent among the more prosperous classes of society than among the poor. Now, the poor are properly not to be reckoned among vaccinated subjects, since Dr. Ferrán's charges vary from four to ten shillings. As the Doctor is said to vaccinate from 500 to 600 persons daily, the operation would seem not to be altogether unprofitable, and the "*guarantee*" which Government refuses is evidently drawn from the public. It may, therefore, safely be concluded, as Professor Brouardel remarks, that Dr. Ferrán has far too hastily stepped out of the scientific and experimental period into the period of what he calls "*practice*." Compare with his rashness the extreme prudence of Pasteur! Yet, the French physiologist operated upon cattle, and not upon man.—*Medical Times and Gazette*, July 11, 1885.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 14 TO JULY 20, 1885.

VOLLUM, E. P., *Lieutenant-Colonel and Surgeon.*—To be relieved from duty in Department of the East on the expiration of his present leave of absence, and to report to Commanding General Department of the Platte for assignment to duty as Attending Surgeon at the headquarters of that department.—*S. O. 159, A. G. O.*, July 14, 1885.

MIDDLETON, J. V. D., *Major and Surgeon.*—Leave of absence extended fifteen days.—*S. O. 159, A. G. O.*, July 14, 1885.

BROWN, J. M., *Major and Surgeon.*—EWEN, CLARENCE, *Captain and Assistant Surgeon.*—TAYLOR, A. W., *Captain and Assistant Surgeon.*—BORDEN, W. C., *First Lieutenant and Assistant Surgeon.*—Ordered to prepare for field service.—*S. O. 64, Department of the Platte*, July 9, 1885.

ELBREY, F. W., *Captain and Assistant Surgeon.*—Sick leave of absence further extended four months on surgeon's certificate of disability.—*S. O. 162, A. G. O.*, July 17, 1885.

GRAY, W. W., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Barrancas, Florida, and ordered for duty at Fort Columbus, New York Harbor.—*S. O. 147, Department of the East*, July 13, 1885.

EVESTE, EDWARD, *First Lieutenant and Assistant Surgeon.*—Ordered for duty as Post Surgeon, Fort McDermit, Nevada.—*S. O. 68, Department of California*, July 11, 1885.

POLHEMUS, A. S., *First Lieutenant and Assistant Surgeon.*—Ordered for duty as Post Surgeon, Benicia Barracks, California.—*S. O. 68, Department of California*, July 11, 1885.

WINNE, C. K., *Captain and Assistant Surgeon.*—Ordered for duty at Benicia Arsenal, California.—*S. O. 68, Department of California*, July 11, 1885.

EDIE, G. L., and BLACK, C. S., *First Lieutenants and Assistant Surgeons.*—Ordered for duty with troops en route to Department of Missouri.—*S. O. 78, Department of Texas*, July 10, 1885.

OFFICIAL LIST OF CHANGES IN THE MEDICAL DEPARTMENT OF THE U. S. NAVY, DURING THE WEEK ENDING JULY 18, 1885.

OWENS, THOMAS, *Assistant Surgeon.*—Granted sick leave for one month, July 14, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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